DOCUMENT RESUME

ED 132 969 IR 004 260

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TITLE The Application of Performance Measures in a Sample of Illinois Public Libraries.
INSTITUTION Illinois Univ., Urbana. Library Research Center.
SPONS AGENCY Illinois State Library, Springfield.
PUB DATE 76
NOTE 88p.
AVAILABLE FROM University of Illinois at Urbana, Urbana, Illinois 61801 (MF $0.83; HC $4.67)

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS Data Analysis; Data Collection; Evaluation Methods; *Library Services; *Measurement Instruments; *Performance Criteria; *Program Effectiveness; *Public Libraries; Use Studies; Workshops
IDENTIFIERS Illinois

ABSTRACT

Sixty-six public libraries selected by random sample, substitutions and participation requests, tested Rutgers University 1970 Performance Measures Manual to gather information on the evaluation and improvement of public libraries. Selection was based on geographic location and budget categories. Following instructions for manual's use at workshops, participating libraries conducted a 3-day study, tabulated and summarized the resulting data. The Library Research Center prepared and sent a computerized profile of each library's scores and comparison statistics as well as questionnaires for feedback on the study. Most participating libraries were capable of conducting the study and summarizing data; most found reasonably clear with the instructions sufficiently easy to follow. Some questioned the manual's relevance and validity for small libraries. The research center found the manual useful in providing data, but was disappointed in its traditional approach. They suggested research be done to refine the manual for use by small libraries. Also mentioned was the need for more detailed instructions, more subjective-type measures and follow-up activities for feedback. (KP)

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ED132969

THE APPLICATION OF PERFORMANCE MEASURES IN A SAMPLE OF ILLINOIS PUBLIC LIBRARIES

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This study was done at the
Library Research Center of the Graduate
School of Library Science at the
University of Illinois under a
contract with the Illinois
State Library

Library Research Center
University of Illinois at Urbana-Champaign
1976

IR004260

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THE APPLICATION OF PERFORMANCE MEASURES IN A SAMPLE OF ILLINOIS PUBLIC LIBRARIES

Introduction and Background

There have long been complaints within the library profession that traditional statistics, such as circulation records, do not adequately measure a library's service to a community. In an effort to help remedy this, the Public Library Association was awarded a contract by the U. S. Office of Education in 1970 for a study on the Measurement of Public Library Effectiveness. The study was conducted by the Bureau of Library and Information Science Research at Rutgers University.

The Rutgers group first conducted a review of the related literature and analyzed the then current library statistical reporting systems. The remainder of the project dealt with the following items: (1) the development of "criteria which appear descriptive of the effectiveness of a public library program," (2) the development of a methodology for the collection of appropriate criteria data, (3) the collection of data in a small number of pilot study libraries, (4) the establishment of tentative ranges of performance, (5) the testing of the criteria and methodology in a national sample of public libraries (due to a lack of funds, the Rutgers group was not able to test the newly developed measures in a full range of public libraries however), and (6) the preparation of a "profile" for each of the sample libraries. The Bureau of Library and Information Science Research issued a final report of the project entitled Performance Measures for Public Libraries,[1] which was published by the Public Library Association in 1973.

Following the initial Rutgers project was a study conducted by the North Suburban Library System of Illinois. This pilot study basically used the same methods of data collection as were used by Rutgers, but it tested the methods in a different size range of libraries. Rutgers had applied the methodology to a sample of twenty libraries with budgets ranging between $100,000 and $3,499,999, while North Suburban tested the measures in twenty-nine libraries with total operating expenditures ranging from approximately $22,000 to $740,000. The North Suburban pilot study thus attempted to test the methodology on smaller libraries than had previously been used.

Staff members of the North Suburban Library System held a workshop early in the spring of 1974 to describe the data collection techniques to their member libraries. They distributed "user tickets" to the member libraries for the collection of data from their library patrons during a three-day period between May 6 and May 12.

These data were then sent to the University of Illinois Library Research Center, which had been funded by an Illinois State Library LSCA grant to analyze the North Suburban pilot study data. (See Appendix A for a more detailed report of the North Suburban pilot study.)

The Library Research Center was also funded by the Illinois State Library with LSCA funds for the purpose of testing the data collection techniques which had been developed by the staff of the Bureau of Library and Information Science Research at Rutgers and which had been incorporated into a performance measures manual--Performance Measures for Public Libraries: a Procedures Manual for the Collection and Tabulation of Data.[2]

Meanwhile, a revised version of the Rutgers performance measures manual was used in an evaluation of the St. Petersburg, Florida, public libraries.[3] The St. Petersburg study was conducted by Ellen Altman, who was one of the authors of the original Rutgers manual.

In addition to the 1974-75 Illinois project, a similar study in New Jersey was designed to further test the performance measures manual developed at Rutgers. The new Rutgers' project was funded by the New Jersey State Library. Its major purposes were to implement and test the reliability of the measurement techniques developed during the initial PLA/ALA sutdy; to develop additional measures of library service availability in New Jersey; to implement an educational program based upon the measurement tools in order to train New Jersey library personnel in data collection and analysis of library operations; and to investigate the feasibility of incorporating those measures into a state-wide statistical reporting system.

The research bureau at Rutgers planned to test their measures in a sample of libraries selected to allow the testing of the measures in a variety of libraries, including systems, small libraries, and libraries in different geographical areas. It was not considered essential that their sample be representative of libraries in New Jersey. They proposed to first test the performance measures in approximately 25 public libraries with budgets of over $100,000 per year. These libraries were to include area library centers, when possible, in order to assure wide geographical spread. Second, they proposed to select a sample of 20-25 libraries with budgets of under $100,000, with special emphasis on libraries with quite small budgets. And third, Rutgers planned to include four or five college libraries that were used heavily by the public.

Illinois Project

The Illinois project was part of the Illinois State Library's program of measurement and evaluation to assist library administrators at the local, system, and state level, and its program of research on problems common to libraries and library systems to facilitate the continued improvement of services at all levels.[4] The project complemented the work of the Public Library Association's Committee on Public Library Goals, Guidelines, and Standards, and the Illinois Library Association's Standards Committee. It was conducted by Lucille M. Wert, Project Director, and Director of the University of Illinois Library Research Center, and four half-time Library Research Center staff members--Ronald R. Powell, Research Associate and Principal Investigator; Teresa M. Fox, Research Associate; Tillie

Krieger, Research Associate; and Stephen Von Vogt, Research Assistant. The Library Research Center staff were advised by a task force consisting of Galen Rike, Specialist, Research and Statistics, Illinois State Library; Pat Hogan, Information Librarian, North Suburban Library System; Gerald Born, Executive Secretary, Public Library Association; Hugh Vrooman, Manager, Systems Analysis and Management, Illinois State Library; Andrew Stimson, Senior Consultant for Public Library Services, Illinois State Library; and Ruth Gregory, Librarian, Waukegan Public Library. The Research Center staff also received valuable assistance from three graduate student assistants--Mitzi Hanno, Gene Wiemers, and Susan Pike.

Goals and Objectives

The long-range goal of the Illinois project was to make available meaningful information to assist public library administrators, library board members, government officials, and interested citizens in the evaluation and improvement of their public libraries.

The important immediate objectives of the project were to: (1) test the performance measures manual on a representative sample of Illinois public libraries, (2) teach a sample of Illinois public library personnel and library system personnel the data collection techniques necessary for using the performance measures manual, (3) assist the participating libraries in the analysis of their data, and (4) provide each library with a profile presenting its "scores" on the major performance measures along with the respective scores for other participating libraries in the same budget category.

In contrast to the Rutgers project, the Illinois study did not attempt to develop any additional measures of library service or to implement a statewide statistical reporting system. However, its primary purpose, the testing of the performance measures manual, was essentially the same as the major objective of Rutgers.

Characteristics of Illinois Libraries

The 1973-1974 Illinois public library statistics[5] indicated that a majority of the approximately 532 Illinois public libraries were quite small and had rather low annual incomes. Fifty-five percent served populations of less than 5,000 persons; seventy percent served populations of less than 10,000. Excluding the city of Chicago, Illinois public libraries served populations ranging between 250 and 127,000 persons.

Forty-one percent of the libraries had an annual tax income of less than $10,000; sixty-two percent had an annual tax income of less than $25,000. The average total operating expenditures and average number of volumes held were also rather low for the public libraries in Illinois as can be seen in Table 1 and Table 2.

TABLE 1

NUMBER AND PERCENT OF ILLINOIS LIBRARIES
BY TOTAL OPERATING EXPENDITURES

Total Operating Expenditures	Number of Libraries	Percent of Libraries
Less than $10,000	197	37%
10,000--19,999	96	18
20,000--49,999	84	16
50,000--99,999	62	12
100,000--299,999	65	12
300,000 and over	28	5

TABLE 2

NUMBER AND PERCENT OF ILLINOIS LIBRARIES BY COLLECTION SIZE

Number of Volumes Held	Number of Libraries	Percent of Libraries
Less than 10,000	177	36%
10,000--19,999	158	32
20,000--39,999	79	16
40,000--59,999	32	6
60,000--99,999	29	6
100,000--300,000	21	4

The public libraries in Illinois are concentrated in the northern part of the state. There are approximately 134 public libraries in the Chicago area (excluding the Chicago Public Library and its branches), 122 libraries in the remaining part of northern Illinois, 180 libraries in the central part of the state, and 96 in the southern third. All but eleven of the state's public libraries belong to one of the state's eighteen public library systems.

Methodology

Sample Design

As noted earlier, a major objective of the study was to test the Rutgers performance measures manual in all sizes of public libraries in Illinois, and for statistical purposes, it was considered important to have significant and nearly equal numbers of libraries representing the major size ranges. Similar to the Rutgers study, it was not considered essential that the libraries included in the project be exactly representative of the libraries in Illinois, and it was considered important that the manual be tested on a significant number of small libraries. In contrast to Rutgers, the Illinois sample was restricted to public libraries.

As it was most practical to select libraries on the basis of only one "size" variable, it was necessary to determine which variable was the most influential. Consequently, it was decided to input several variables, including total operating receipts, total operating expenditures, population served, and volumes held, in a multiple regression computer program to find the variable that was able to explain the most variation in each of the other variables. Each of the variables was, in turn, treated as the "dependent" variable in a multiple regression design. It was then determined which of the remaining variables provided the best predictor of the "dependent" variable (after removing the effects of the other independent variables). It was thus found that total operating expenditures tended to explain the most variation in the other variables and therefore appeared to be the most revealing "size" variable.

All of the public libraries in Illinois, excluding the Chicago Public Library, were then divided according to their geographical region (Chicago area, northern Illinois, central Illinois, and southern Illinois) in order to assure that some libraries in all areas of the state would have a chance to participate in the study. The Chicago area included North Suburban, Suburban, and Du Page Library Systems; the northern area included Northern Illinois, River Bend, Starved Rock, and Bur Oak Library Systems; the central area included Western Illinois, Great River, Illinois Valley, Corn Belt, Lincoln Trail, and Rolling Prairie Library Systems; and the southern area included Lewis and Clark, Cumberland, Kaskaskia, and Shawnee Library Systems. Next, the libraries were stratified on total operating expenditures within each geographical area. The strata contained libraries within the following ranges: \$0--9,999, \$10,000--19,999, \$20,000--49,999, \$50,000--99,999, \$100,000--299,999, and \$300,000 and over (see Table 1 for the statewide distribution of libraries according to total operating expenditures).

The initial stratified random sample was then drawn, and it consisted of 17 libraries from the Chicago area, 20 libraries from northern Illinois, 19 libraries from central Illinois, and 15 libraries from southern Illinois, for a total of 71 libraries (for a break-down by budget category see Table 3.).

Of the original stratified random sample of 71 libraries, 38 libraries or 54 percent, agreed to participate in the Illinois performance measures project. Table 4 shows a break-down of those libraries by geographical area and total operating expenditures. It appeared that there was a direct relationship between the total operating expenditures of the libraries and the number of respondents. Because of this relationship, a higher percentage of the original sample in the Chicago and Northern geographical areas agreed to participate in the project than in the Central and Southern areas. Tables 5 and 6 show the percentages of the total sample by total operating expenditures and geographical area.

The Library Research Center staff contacted many of the original sample's non-respondents to determine the reasons for libraries declining to participate in the study. The reasons most commonly stated by the head librarians were (1) there was not enough time before the study's starting date to obtain the library board's approval to participate; (2) the library was too small and did not have enough staff members to conduct a study; and (3) the library did not have enough time to collect the performance measures data and provide its customary services as well.

TABLE 3

GEOGRAPHICAL AND TOTAL OPERATING EXPENDITURE CHARACTERISTICS OF ORIGINAL SAMPLE

Geographical Area	Total Operating Expenditures						Total Number of Libraries
	$0--9,999	10,000--19,999	20,000--49,999	50,000--99,999	100,000--299,999	300,000+	
Chicago	4	3	2	2	3	3	17
Northern	5	3	3	3	3	3	20
Central	4	3	3	3	3	3	19
Southern	3	3	3	3	3	0	15
Total	16	12	11	11	12	9	71

TABLE 4

GEOGRAPHICAL AND TOTAL OPERATING EXPENDITURE CHARACTERISTICS OF POSITIVE RESPONDENTS OF ORIGINAL SAMPLE

Geographical Area	Total Operating Expenditure by Thousands						Total Number of Libraries
	$0--9,999	10,000--19,000	20,000--49,999	50,000--99,999	100,000--299,999	300,000+	
Chicago	1	2	2	1	3	3	12
Northern	2	3	3	0	2	2	12
Central	0	1	2	1	2	3	9
Southern	0	0	1	2	2	0	5
Total	3	6	8	4	9	8	38

TABLE 5

PERCENT POSITIVE AND NEGATIVE RESPONSES OF ORIGINAL SAMPLE BY TOTAL OPERATING EXPENDITURES

Total Operating Expenditures	Percent Positive Responses	Percent Negative Responses
$0--9,999	19%	81%
10,000--19,999	50	50
20,000--49,999	72	28
50,000--99,999	36	64
100,000--299,999	75	25
300,000+	89	11
Total	54%	46%

TABLE 6

PERCENT POSITIVE AND NEGATIVE RESPONSES OF ORIGINAL SAMPLE BY GEOGRAPHICAL AREA

Geographical Area	Percent Positive Responses	Percent Negative Responses
Chicago	70%	30%
Northern	60	40
Central	47	53
Southern	33	67
Total	54%	46%

As 38 libraries did not represent the desired 10% sample of Illinois public libraries, it was decided to replace the sample libraries that had declined with libraries of similar budget sizes. With the cooperation and assistance of the appropriate systems headquarters, 23 substitutions were made for libraries that had not agreed to participate in the study. For the most part, replacements were libraries from the same systems as those that responded negatively. With the addition of the 23 substitutes, the sample consisted of 61 libraries with a composition quite similar to the original sample. The only segments that were left with smaller than desirable numbers of libraries were the southern geographical area and the $0--10,000 budget range.

In addition to the 23 substitutes, 17 libraries from two systems requested that they be allowed to participate in the study. In spite of the fact that the inclusion of these extra libraries would adversely effect the randomness of the sample, it was decided to include them in the project. It seemed undesirable to prevent any library from taking the opportunity to evaluate their services if they so wished. These extra libraries were fairly well distributed within a range of $40,000 to $482,235 on total operating expenditures, and they brought the grand total of libraries participating in the study to 78. For break-downs of the final sample by method of inclusion, geographical area, and total operating expenditures, see Tables 7, 8, and 9.

TABLE 7

COMPOSITION OF FINAL SAMPLE BY METHOD OF INCLUSION AND GEOGRAPHICAL AREA

Geographical Area	Method of Inclusion			
	Original	Substitute	Extra	Total
Chicago	12	9	17	38
Northern	12	6	0	18
Central	9	5	0	14
Southern	5	3	0	8
Total	38	23	17	78

TABLE 8

COMPOSITION OF FINAL SAMPLE BY METHOD OF INCLUSION AND TOTAL OPERATING EXPENDITURES

Total Operating Expenditures	Method of Inclusion			
	Original	Substitute	Extra	Total
$0--9,999	3	1	0	4
10,000--19,999	5	7	1	13
20,000--49,999	9	3	1	13
50,000--99,999	4	5	2	11
100,000--299,999	9	7	7	23
300,000+	8	0	6	14
Total	38	23	17	78

TABLE 9

COMPOSITION OF FINAL SAMPLE BY GEOGRAPHICAL AREA AND TOTAL OPERATING EXPENDITURES

Total Operating Expenditures	Geographical Area				
	Chicago	Northern	Central	Southern	Total
$0--9,999	1	2	1	0	4
10,000--19,999	3	4	4	2	13
20,000--49,999	4	5	3	1	13
50,000--99,999	6	2	1	2	11
100,000--299,999	15	3	2	3	23
300,000+	9	2	3	0	14
Total	38	18	14	8	78

The final numbers of libraries from each library system agreeing to participate in the study were as follows:

Bur Oak--6 libraries
Corn Belt--1 library
Cumberland Trail--2 libraries
Du Page--15 libraries
Great River--2 libraries
Illinois Valley--1 library
Kaskaskia--2 libraries
Lewis and Clark--4 libraries
Lincoln Trail--2 libraries
North Suburban--18 libraries
Northern Illinois--10 libraries
River Bend--2 libraries
Rolling Prairie--6 libraries
Suburban--5 libraries
Western Illinois--2 libraries

Workshops

The Library Research Center staff held six workshops across the state of Illinois in March and April 1975, in order to explain the use of the Rutgers performance measures manual. The first workshop was held in Decatur and was intended for system's personnel only. The next four were held in Bloomington, Effingham, Rockford, and Wheaton respectively for one to two staff members from each of the participating libraries in those areas. The final workshop was held in Deerfield for North Suburban Library System members only. (The North Suburban Library System had been allowed to include 12 extra libraries in the study, bringing their number of participants to 18, so they had requested a workshop for their members only.) Each of the library system headquarters in the state assisted the Library Research Center in determining which of its members that had been selected for the study would be attending a workshop.

The Decatur workshop was attended by 15 people representing 11 library systems and the Illinois State Library. Due to poor weather, the workshop at Bloomington was attended by only 11 people representing 8 libraries. Attendance at each of the remaining workshops was as follows: Effingham--11 people representing 8 libraries, Rockford--17 people representing 9 libraries, Wheaton--41 people representing 25 libraries and 3 systems, and Deerfield--23 people representing 16 libraries.

The workshops were scheduled for one day from approximately 9:30 a. m. to 4:00 p. m. Each workshop was opened by a speaker presenting the background of the performance measures study and the goals of the workshop. The speakers for the six workshops were, in the same order as the workshops, Lucille M. Wert, Director of the Library Research Center, University of Illinois; Gerald Born, Executive Secretary, Public Library Association; Galen Rike, Specialist, Research and Statistics, Illinois State Library; Donald E. Wright, Librarian, Evanston Public Library; Ruth Gregory, Librarian, Waukegan Public Library; and Pat Hogan, Information Librarian, North Suburban Library System. Following the opening address, a page-by-page presentation of the Rutgers manual was given highlighting the critical sections and providing detailed explanations of some of the techniques and calculations. The presentations at the workshops basically followed the format of the performance measures manual, which included the following topics:

1. Materials availability--recently published books, titles already in the library's collection, and periodical availability;
2. Materials usage--in-library circulation, outside the library circulation, and inter-library loan circulation;
3. Facilities availability and usage--user characteristics and equipment and facilities availability and usage; and

4. Staff availability and usage--public service personnel availability and patterns of staff assistance. (See Appendix G for a copy of the complete manual.)

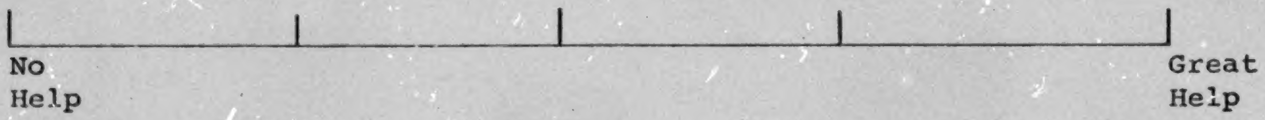
After the manual presentation, a question and answer period was held and the study materials were distributed. Each participating library, which had already been mailed a copy of the manual, was given user tickets and worksheets for its evaluation.

Questions and comments most often received from participants during the workshops included the following: (1) questions about the validity of a BPR sample of recently published books (p. 1 of the manual), especially for small public libraries, (2) questions on the applicability of an inter-library loan measure (p. 30) for individual libraries in Illinois, as nearly all interlibrary loan requests are processed by the systems, (3) comments that the user tickets should have asked more questions of the patrons, (4) confusion over some of the definitions in the section on public service personnel availability (e.g., the distinctions between assigned, available, and assisting), (p. 52), (5) comments that the circulation forms (p. 28-9) should have provided for periodicals, (6) comments that the title availability forms (p. 16 and 18) should have provided for AV materials, (7) comments on the difficulty of measuring in-library circulation and (8) general comments on the large amounts of time and staff apparently needed to conduct a three-day evaluation.

Near the end of the project, questionnaires were sent to a non-random subsample of the participating libraries (see Appendix F). It consisted of 17 libraries chosen to represent each of the budget (total operating expenditures) categories and 6 persons picked to represent the library systems. Twenty of the questionnaires, or 95%, were completed and returned.

Two of the questions in the questionnaire were concerned with the performance measures workshops, and those questions along with summaries of their answers follow.

7. How helpful did you find the workshop on the use of the performance measures manual? (Rate on the following 5-point scale):



Assigning values of 1 for "no help" through 5 for "great help" the 18 responses were summarized as follows:

Mean response = 3.58
Median response = 3.50
Range = 2-5

Do you have any suggestions for changes in future workshops on the performance measures manual?

Typical responses to the second part of question 7 included the following: (1) the workshops should be longer, (2) include more input from persons who have actually conducted an evaluation in a library, (3) include more detailed instructions, and (4) include more demonstrations. Comments about the workshops were generally favorable, however, and most participants believed that they had been adequately prepared to conduct their evaluations.

The observations of the Library Research Center staff concerning the workshops generally agreed with those of the participants. Longer workshops with more attention to details of data tabulation might well have been more effective, but it is probable that fewer librarians would have been willing or able to attend two-day workshops. The workshops did appear to adequately prepare the great majority of the participants. As the data that was collected by the libraries was checked by Research Center staff, it became apparent that most of the poorly done evaluations were conducted by libraries not represented at any of the workshops.

Data Collection

All sample libraries were asked to conduct performance measures studies during a three day period, to collect performance measures data on the items listed on page 14, to tabulate their data as instructed in the manual, and to return the results to the Library Research Center within approximately four weeks from the dates of their respective workshops. As suggested in the manual, the libraries were requested to select three days, within the same week if possible, that would reflect all of the various types of activities to be measured. They were also asked not to advertise in advance, or at least not to indicate the exact data collection days, to avoid affecting the results for their libraries.

It was found that most of the participating libraries apparently required more than four weeks to plan and conduct their evaluations, tabulate their data, and forward results to the Research Center. This tardiness was expected, but it was considered necessary to set a fairly early deadline in order to encourage prompt returns. The last workshop was held on April 15, 1975, and the last return was not received until July 18, 1975.

Before the libraries began to actually collect data, six libraries indicated that they were dropping out of the study, thereby reducing the number of participants to 72. In addition, six more libraries never completed their evaluations and consequently did not return any data to the Research Center. The remaining 66 libraries did conduct their evaluations and send their results to the Research Center, and that constituted an 85% rate of return for the 78 libraries in the final sample.

During the data collection period, Library Research Center staff and systems personnel who had attended the first workshop attempted to resolve any problems encountered by the participants. In a few cases, systems personnel actually assisted libraries in the collection and tabulation of their data. Some of the systems headquarters reviewed their member libraries' data before forwarding them to the Library Research Center. The Library Research Center staff's impression of the data that was received from the participants was that generally most of it was properly collected and tabulated. The larger libraries and the libraries that had been represented at the workshops tended to provide the best quality data in terms of accuracy and thoroughness.

However, there were a variety of problems and errors in the data received at the Research Center, and it was found necessary to devote a considerable amount of time to preparing the data for computer coding and analysis. Some problems encountered in the data collection resulted from the manual's being designed for a one-day data collection period rather than for the three-day period used in Illinois.

The sections of the manual that the Research Center staff found to be the most common trouble spots are listed below:

1. Recently Published Books (p. 1 of the manual)--this section was almost always performed correctly, but some of the libraries did skip it, apparently because they believed that the BPR sample had little validity for their libraries.

2. Titles Already in the Library's Collection (p. 6)--few participants encountered difficulty in performing the shelflist measurements and calculations, but some skipped this section because they anticipated problems. Several libraries drew samples of their shelflists which resulted in less than or more than the 500 titles recommended in the manual.

3. User Characteristics (p. 32)--various totals that should have balanced often did not. For example, the total number of students and non-students often did not equal the total number of patrons. Such imbalances appeared to be due to errors in sorting user tickets, inconsistencies in counting patrons as students or non-students, and problems with "no-responses."

Several participants had difficulty with the "Length of Stay" tabulations, largely because they misunderstood the meaning of the time intervals. At least two libraries considered the time intervals as time of arrival points rather than length of stay intervals.

4. Equipment and Facilities Usage (p. 46)--several participants simply miscalculated the utilization factors displayed on page 50 of the manual.

5. Public Service Personnel Availability (p. 52)--several libraries miscalculated the availability factors, apparently because they did not understand the distinction between "available" and "assisting". In addition, not all libraries interpreted "available" the same, so not all of the availability factors were calculated on the same basis. Two or three participants turned in questionable availability factors, but they did not provide enough data to allow the Research Center staff to check their calculations.

6. Patterns of Staff Assistance (p. 55)--there appeared to be few difficulties encountered in this section except in the cases of a few libraries that were both local libraries and systems headquarters. In these particular libraries, it was difficult to distinguish between questions directed to the systems' collection and to the local collection. A few libraries collected these data for only one day, apparently because they simply were unable to devote three full days to the collection of the necessary data for this section.

Data Analysis

As noted above, each library that participated in the performance measures study tabulated its own data. These tabulations were then sent to the Library Research Center, either directly or through the appropriate system headquarters. After the data was received at the Research Center, it was checked for completeness and accuracy. If a significant amount of data was missing from a library's returns, that library was contacted. In a few cases, a library was able to locate all or part of the missing data and return them to the Research Center.

Having the participants tabulate and summarize the data collected on their user tickets and complete all of the other forms and summary sheets, resulted in a considerable savings of time for the Library Research Center. For example, for the earlier pilot study conducted by the North Suburban Library System (see p. 1 and Appendix A), the Research Center had to process over 45,000 user tickets. As mentioned earlier, the Research Center staff still had to devote a considerable amount of time to checking and correcting the returns, but if the libraries had not done their own tabulations, the data analysis would have taken much longer.

In addition to the savings in time, other important benefits were gained by requiring the libraries to tabulate and summarize their own data. This process provided a better test of the manual's ability to be self-explanatory and of the participants' abilities to conduct their own performance measurements.

After all of the returns were checked and corrected, the data were coded and keypunched. A FORTRAN computer program was written to analyze the data. The program was designed to produce a printout for each library that presented its "scores" on many of the performance measures, and, for purposes of comparison, the corresponding mean, median, and range scores for all of the libraries in the same budget category. Each printout, or profile, was fully labeled and required no additional editing. An individual profile was printed for each of the 66 libraries that returned performance measures data to the Library Research Center. (For a copy of a sample profile, see Appendix I.)

It should be noted that the scores presented on each profile were not necessarily norms. Norms are often considered to represent ideal patterns or levels of achievement, and that is not what the performance measures score represented. However, the scores were quite comparable to norms more conservatively defined as standards of development or achievement derived from the average or median achievement of a large group. Therefore, each library was encouraged to interpret its scores as indications of how well it was performing in comparison to other libraries of a similar budget size, and not to consider the group scores as ultimate goals or ideal levels of performance. In addition, each library was cautioned that a meaningful interpretation of a profile required that a specific score or measure be considered in connection with other measures and relevant local factors rather than studied as a single, isolated factor.

After the data analysis was completed, the profiles, along with the original tabulations and cover sheets, were sent to the Illinois State Library for distribution to the participating libraries.

Findings

A major objective of this project was to test the Rutgers performance measures manual on a sample of Illinois public libraries of varying sizes. In order to encourage feedback on the experiences of the libraries participating in the study, they were invited to include relevant comments with their performance data. Several of the participants did enclose comments with their study results, and the most representative ones are paraphrased below.

1. The BPR sample in the section on Recently Published Books (p. 1 of the manual) was too time consuming and of questionable value, especially for small libraries.
2. The procedures for sorting user tickets (p. 35-6) were difficult to understand and too time consuming.
3. The section on Patterns of Staff Assistance (p. 55) was not meaningful for small libraries.
4. The Materials Availability measures (p. 1-22) required a lot of time and effort but did produce valuable profiles of a library's collection.

5. The various measurements did not present a complete picture of Illinois public libraries because of the availability of system resources.
6. The tabulation procedures were time consuming but generally easy to follow.
7. Nearly all patrons were willing to fill out user tickets.
8. A significant amount of volunteer help, especially in the small libraries, was necessary to conduct an evaluation.
9. The measures had value but need refinement.
10. The performance measures should include more subjective, qualitative measures.
11. This method of measurement holds considerable promise but is still lacking in suitability for small public libraries.
12. Volunteers were responsible participants in carrying out the evaluation.
13. Most staff members were enthusiastic and cooperative, in spite of the demands on their time.
14. The Periodical Availability sample (p. 20) was not valid for small libraries.
15. It was difficult to obtain an accurate random sample of shelflists because of human error.
16. The evaluation was an interesting experience but too time consuming.
17. The instructions were clear and well organized.
18. A three-day study is not long enough to get reliable statistics on many of the subjects covered.
19. Some of the worksheets (e.g., in-library circulation and equipment and facilities) were not large enough to use as actual tally sheets.

In general, the participating librarians seemed to believe that the evaluations required a lot of time and staff, but they still considered the study worthwhile and were anxious to receive results.

In addition to the comments from participants that were received along with their measurements data, eight questions in the previously mentioned questionnaire also solicited reactions to the study from some of the participants. Seven of those eight questions and their typical answers (or summaries) follow. (Question number 7 was presented on page 16.)

1. Approximately how many staff hours were needed to prepare for the three-day performance measures study of your library?

   Mean response = 20 hours
   Median response = 15 hours
   Range = 2-60 hours

2. Approximately how many staff hours were needed to organize and tabulate the data collected during the three-day performance measures study?

   Mean response = 45 hours
   Median response = 38 hours
   Range = 6-150 hours

3. How many extra persons (e.g., volunteers, temporary employees, etc.), if any, were needed by your library to complete the three-day study and tabulations?

   Mean response = 5.6 persons
   Median response = 2 persons
   Range = 0-32 persons

4. In your opinion, is the performance measures manual sufficiently self-explanatory?

   No = 7 responses
   Yes = 10 responses
   Qualified yes = 4 responses

5. What problems did you encounter in connection with the performance measures manual and/or the three day study?
    a. None.
    b. Required too much staff time.
    c. The manual was better suited for large libraries.
    d. Patrons were not consistent in marking user tickets.
    e. Staff and volunteers were not consistent in their methods of collecting data.
    f. Tabulation of user tickets.
    g. Ambiguous questions on user tickets.
    h. Categorization of questions in Patterns of Staff Assistance section were difficult.
    i. In-circulation counts.
    j. Tabulations.
    k. Too many different forms to keep track of.
6. Which portions of the performance measures study do you expect to be the most helpful in the administration of your library?
    a. User information (most frequent response.)
    b. Title availability statistics.
    c. Equipment and facilities use.
    d. Circulation statistics
    e. Staff availability.

   The least helpful?
    a. Equipment and facilities availability (most frequent response).
    b. BPR sample
    c. Periodical availability.
    d. In-library circulation count, as patrons often reshelved their books.
    e. Staff assistance patterns.

8. What is your general opinion of the performance measures manual as a tool for assisting in the evaluation and improvement of your library?
    - a. Would be better if it were "scaled down".
    - b. Needs refinement.
    - c. Too time consuming.
    - d. Needs to be modified for small libraries.
    - e. A reliable method of measurement.
    - f. Helpful.
    - g. Needs to be modified if it is to be self-explanatory.
    - h. A useful tool.

Library Research Center Staff reactions to the performance measures study were generally similar to those expressed by participants. However, there are a few staff observations about the manual and the management of the study that were not made by the participants, or if they were made, they are worth repeating. Those observations follow.

1. The Equipment and Facilities Usage section (p. 45) called for equipment and facilities to be divided into adult and juvenile lists, but subsequent forms did not provide for breakdowns by adult and juvenile.
2. A few libraries were so small they did not have a shelflist, and special arrangements had to be made for those libraries to draw their sample of titles from their card catalogs.
3. The utilization factor for equipment and facilities was difficult to interpret as it can exceed 1.
4. The BPR and periodical samples were the most criticized sections of the manual.
5. The sorts of user tickets were difficult and time consuming, and the "length of stay" measurement was not readily clear to everyone.

6. There was considerable confusion over the counting of seats in meeting rooms in the Equipment and Facilities Usage Section.
7. The "available" and "assisting" categories in the Public Service Personnel Availability section (p. 52) caused a lot of problems.

Suggestions for Manual Revision

In addition to the suggestions for revisions of the performance measures manual that can be inferred from some of the previously listed comments and questionnaire responses, the following specific suggestions were received from participants and/or made by Research Center staff:

1. User Characteristics: Form IV should have a "total" column.
2. User Characteristics: Form V should have a "total" column.
3. User Characteristics: Form VI would be more useful if it asked for percentages for each "satisfaction" category.
4. User Characteristics: Form VII should have "totals" for "student" and "occupation" categories.
5. It would be helpful if the manual indicated which totals or subtotals should match, in order to catch errors in the calculations.
6. Title Availability Sample: Form III should have a row for materials with no publication dates.
7. All of the forms with time listings (library hours) should include the 8:00 a.m.-9:00 a.m. and 9:00 p.m.-10:00 p.m. hours.
8. Make the listings of equipment and facilities consistent on pages 47, 48 and 50.
9. Add a total column to Equipment and Facilities: Form II.
10. Directions on how to count shelflist cards indicating multiple copies or multiple volume sets should be added to the section on Titles Already in the Library's Collection.

11. Columns for AV materials and/or periodicals should be added to Title Availability Sample: Form II and Form III, and Circulation Distribution: Form I and Form II.
12. The forms for In-Library Circulation and Equipment and Facilities that are used as tally sheets need to be larger.
13. The time scale at the top of the user tickets should be revised to facilitate sorts on time intervals.
14. A form asking for daily totals of In-Library Circulation by date of publication is needed.
15. If used for more than one day, all of the forms should provide a space for the date.
16. An analysis of In-Library Circulation by Dewey class would be useful.
17. On the user ticket, "grade" should be changed to "grade level"; question #5 should state whether only library cards issued by that particular library or any library cards accepted by that library indicate a "yes" answer.
18. A sample of titles from Public Library Catalog or some other recommended bibliography for public libraries should be substituted for the BPR sample.
19. Provide forms for the tabulations of Public Service Personnel Availability factors.
20. Provide a more extensive list of sample occupations.
21. Add "no response" columns to User Characteristics: Form I and Form II.
22. Add rows for "records" to In-Library Circulation: Form I and Form II.
23. Revise the estimates of the time required for the various measurements (p. x).
24. Add a row for a nonfiction subtotal to Title Availability Sample: Form II.

25. In the section on Titles Already in the Library's Collection, indicate how biographies that are classified as "B" should be treated.
26. In the section on user characteristics, clarify the distinctions between full-time students and part-time students with part-time jobs, and between full-time housewives and housewives with part-time jobs.
27. Add pre-school categories to User Characteristics: Form IV, Form VI, and Form VII.
28. In the section on Public Service Personnel Availability, indicate how availability factors should be determined for libraries too small to have separate departments or areas.

Additional minor revisions necessitated by typographic errors in the manual and changes desired by the Library Research Center staff were included in an "Errata and Addendum" supplement that was given to every participating library (see Appendix H).

Summary and Conclusions

In summary, the project entitled "Measurement and Evaluation of Public Library Services," which was funded by the Illinois State Library with LSCA funds, was conducted primarily to test the performance measures manual developed at Rutgers.

In order to achieve that objective, the University of Illinois Library Research Center drew a stratified random sample of 71 public libraries representing major budget categories and geographical areas within the state of Illinois. Of the original 71 libraries, 38 libraries agreed to participate in the study. In addition, 23 libraries agreed to serve as substitutes for original sample libraries that had decided not to participate. An additional 17 libraries asked to be included in the performance measures study, and this brought the total number of participating libraries to 78.

The Library Research Center staff held six workshops across the state of Illinois to instruct the librarians in the use of the performance measures manual. All participants were asked to conduct a three-day performance measures study, tabulate and summarize their data, and return the results to the Library Research Center. Sixty-six libraries, or 85% of the 78 participants, eventually did return results to the Research Center.

After all of the data was received by the Library Research Center, a computer program produced for each library a "profile" that presented that library's "scores" on many of the performance measures, and, for purposes of comparison, the corresponding mean, median, and range scores for all of the libraries in the same budget category. These profiles were then sent to all of the participating libraries.

In order to gain additional feedback on the performance measures study, questionnaires were sent to a non-random subsample of the participating libraries. The sample consisted of 17 libraries chosen to represent each of the budget categories and 6 persons picked to represent the library systems.

As stated in previous sections of this report, the findings of this study were generally encouraging. Most of the participating libraries were entirely capable of conducting a performance measures study and of tabulating and summarizing the resultant data.

The Library Research Center staff did find it necessary to devote a considerable amount of time to "cleaning" the data, but this was due more to the large amount of data generated by 66 libraries than to general misunderstandings of or deficienceis in the performance measures manual. Most libraries found the manual reasonably clear and the instructions sufficiently easy to follow.

This report has listed a fairly large number of items that caused some difficulty for one or more libraries, but these trouble spots tended to be relatively minor. In addition, several measures which met with varying amounts of resistance from the participants are listed. But these items were opposed on the basis of their relevance to the study or their validity for particular types of libraries (especially small libraries) and not for deficiencies in their methods.

The Library Research Center staff's greatest disappointment in the performance measures manual was that it took a rather traditional approach to the evaluation of public library services. The indicators of performance which were measured by the manual are similar in nature to statistics which have long been collected by libraries. However, the manual did incorporate more of those measures than any document to date, and it did introduce a few new indicators (e.g., public service personnel availability factors).

All in all, the performance measures manual appeared to be a useful tool capable of providing library administrators with substantial data for evaluating their libraries' services. It indicated a tremendous amount of planning, and most of the various instructions had been thoroughly thought through.

Suggestions for Further Research

As stated above, the many instructions in the Rutgers performance measures manual seemed to have been carefully developed and were clearly presented. Yet, libraries that participated in the training workshops generally returned better-tabulated data to the Library Research Center than did those libraries that did not participate in the workshops. Therefore, it would appear that even more detailed instructions are necessary if the manual is to be entirely self-explanatory. Additional research would be helpful in revising some of the instructions in order to reach that end.

In addition, it was clear from this study that further research is needed in order to refine the manual so that it will be more acceptable to, and valid for, small public libraries.

Thirdly, the Library Research Center staff believe that it would be desirable to integrate more subjective-type measures into the manual. One way of accomplishing this would be to expand the user ticket. Another method would be to distribute user questionnaires to a sample of the patrons as was done in the St. Petersburg, Florida, study. Obviously, additional research would be needed to develop such tools.

And finally, it is suggested that future studies involving libraries as participants include follow-up activities designed to present the results of the studies and to aid the libraries in the interpretation of their individual reports. The interpretation element is essential if the participating librarians are going to be able to apply study data to the administration of their libraries. It is also important that participants receive enough feedback from such studies to encourage them to begin systematically evaluating their library services rather than merely participating in single, isolated research studies.

FOOTNOTES

[1] Ernest R. DeProspo, Ellen Altman, and Kenneth E. Beasley, Performance Measures for Public Libraries (Chicago: The Public Library Association of the American Library Association, 1973), p. 3.

[2] Ernest R. DeProspo et al., Performance Measures for Public Libraries: a Procedures Manual for the Collection and Tabulation of Data (New Brunswick, New Jersey: Bureau of Library and Information Science Research, Rutgers University, 1974).

[3] Report on Library User Survey, 1974. (St. Petersburg, Florida: Management Improvement Department, 1974).

[4] Meeting the Challenge: Illinois State Library's Long-Range Program for Library Development in Illinois, 1974-1979, Sec. 106.2 and 106.3

[5] "Illinois Public Libraries Statistics, 1973-1974," Illinois Libraries, Vol. 56, No. 8 (October 1974), p. 585-605.

ANNOTATED BIBLIOGRAPHY

Bailey, Andree. "Standards for Library Service in Institutions: in the Correctional Setting." Library Trends, 21(October 1972), 261-6.

The first official standards for library service in adult correctional institutions were approved in 1943. New standards were in the process of being written in 1972. These standards for correctional institutions included: importance of a trained librarian, a regular library budget, well-selected materials and suitable quarters. They also specified numbers of people and volumes per population served. The new standards were written in a functional rather than organizational manner.

Blake, Fay and Edith Perlmutter. "Libraries in the Marketplace." Library Journal, 99(January 15, 1974), 108-11.

A discussion on charging for information vs. free libraries is given. The authors are in favor of free libraries and additional public support.

Brown, Helen M. "College Library Standards." Library Trends, 21(October 1972), 204-8.

The author outlines the historical background which lead to the 1959 standards. Each set of standards, beginning in 1928, became more specific. The 1959 standards present a comprehensive guide to good library administration and include quantitative measures. Revision is required to bring it up-to-date.

Clapp, Verner W. and Robert T. Jordan. "Quantitative Criteria for Adequacy of Academic Library Collections." College and Research Libraries, 26(September 1965), 371-80.

The authors argue that the Standards for College Libraries and the Standards for Junior College Libraries are inadequate for estimating the sizes required for minimum adequacy by libraries of academic institutions of widely differing characteristics. They developed new formulas which attempt to identify the principal factors affecting academic needs for books and to assign suitable weights to each factor. They then illustrated the application of the formulas to specific institutions, but decided that while the results are useful, further research is needed. They did conclude that it is possible to provide a meaningful quantitative measure of adequacy in library collections.

Cowgill, Logan O. and Robert J. Havlik. "Standards for Special Libraries." Library Trends, 21(October 1972), 249-60.

Diversity is the most common element in describing special libraries since they are an integral part of the institution they serve.

Standards which include the objectives of the parent organization have been written for various groups of special libraries. Law, medicine, and government have served as quidelines for special libraries.

Crowley, Terence and Thomas A. Childers. Information Service in Public Libraries: Two Studies. Metuchen, New Jersey: Scarecrow, 1971.

Crowley and Childers present two sequential studies of the relationship of quantitative library statistics to qualitative information service. Crowley considered both in-person questions and telephone questions, while Childers limited his study to telephone inquires. Both researchers focused on the relationship between a high degree of monetary support for library service and ability to accurately deliver factual information. Both used a set of moderately difficult questions and trained personnel to act as anonymous questioners in a selected group of New Jersey libraries.

Only 55 percent of Childers' questions (64 percent if questions not attempted are not considered to be incorrect answers) and 36 percent of Crowley's questions were answered correctly.

Crowley found no significant relationship between the accuracy of answers and total expenditures and/or per capita support. Childers did find a significant relationship between total expenditures and the accuracy of responses.

DeProspo, Ernest R. "A Study of Evaluation: Measurement of Effectiveness of Public Library Service." Wisconsin Library Bulletin, 69 (January-February 1973), 7-10.
Ribbens, Dennis. "How Well do You do?" Ibid., 3-6.

De Prospo's article is essentially a short summary of his "Measurement of Effectiveness of Public Library Service." He does note a few conclusions drawn from the ALA study: (1) the local library is capable of collecting the desired information within tolerable error limits, (2) the criteria developed can provide the basis for individual profiles of libraries as well as uniformly comparative bases, (3) not all aspects of the public library program are appropriate to quantification, and (4) the measurement indicators can be developed for the local library, a given library system, or a national reporting system.

Ribben's article is essentially a synthesis of some of the problems connected with measuring and evaluating public services in public libraries. He argues that an evaluation should combine both quantitative and qualitative measures.

Dick, Elizabeth and Bernard Berelson. "What Happens to Library-Circulated Books?" Library Quarterly, 18(April 1948), 100-7.

This study attempted to determine the extent to which a public library's data on its circulation service represent an accurate index of actual service. Circulation figures (for the one library investigated) underestimated the library's impact in their measure of the gross contact between the library and the community, in that the library reached about half again as many people as it had borrowers, and it provided them with about one-fifth again as many books as it circulated.

Circulation figures overestimated the library's impact in terms of actual reading, in that a small proportion of the books checked out were not read at all and only two-thirds of them were read in their entirety.

The researchers concluded that in terms of "actual service" the public library had a slight margin on the credit side.

Downs, R. "A Survey of Purdue University Libraries." Indiana Slant, 30(March 1968), 5-6.

Downs and Seibert cited 11 reasons why libraries were used:

1. Course required
2. Self improvement
3. Pleasure reading
4. Borrow material for further reading
5. Research for term paper
6. Research for graduate exam or thesis
7. Research for publishable paper or book
8. Xerox
9. Return materials to library
10. Do home work with own books
11. Ask questions which do not require borrowing (reference)

Drexel Institute of Technology. Problems of Library Services in Metropolitan Areas. Eastern and Southeastern Seminar on Problems of Library Services in Metropolitan Areas, November 1965. Directed by Dorothy Bendix and co-sponsored by American Association of State Libraries of Drexel Institute of Technology. Philadelphia: Drexel Press, 1966.

The participants were made up of planners and policy makers at the state and metropolitan library levels. The seminar discussed the problems and trends of urbanization; the problems of metropolitan library service; and the implications for state library agencies, their problems, their role, and their increasing responsibilities.

Drexel University. Graduate School of Library Science. Measuring the Quality of Public Library Services; a Report to Participants. Philadelphia, 1972. ED 077 539

Thomas Childers reports that the purpose of the workshop was to explore attitudes toward service, discuss the many facets of measuring library services and get a close-up view of one particular method of evaluating services: "hidden testing". Informal proceedings of the workshop include: (1) a talk by Ernest De Prospo entitled "The Measurement Art," giving the general state of public library measurement and some new techniques that are currently being explored, and (2) two talks by Childers--a discussion of recent studies that have involved the hidden testing of library services, and a summary of the workshop with recommendations for future activity.

Durham University. Project for Evaluating the Benefits from University Libraries: Final Report. Durham: University Computer Unit, 1969.

During 1966-69 a team of investigators studied the university libraries of Durham and Newcastle, and developed a planning model. This final report discusses the survey techniques used, a sampling of the data collected, a discussion of the modelling methods, and suggestions for further research.

Factual data presented in the report include: reactions of Durham academic staff to a personalized current awareness service, length of library visits, frequency of undergraduate use, user activities within the library, times for users to perform various activities, searching methods of library users, effect of distance on library visits, relation between lectures and library visits, staff and student borrowings by subject, and the library staff time needed to perform various tasks.

Evans, Charles. Middle Class Attitudes and Public Library Use. Littleton, Colorado: Libraries Unlimited, 1970.

This study compared the attitudes of library users and nonusers who were registered voters in Oceanside, California. The subjects of the study were middle-income persons whose educational attainments were sufficient to enable them to use their public library easily. It was found that the attitudes of the library users among the subjects were significantly more favorable to the public library than were the attitudes of the nonusers, but the attitudes of both the users and the nonusers were generally favorable to the library. There were three significant differences in personal characteristics between the user and nonuser groups. The members of the user groups had completed more years of school, a larger percentage of them were women, and a smaller percentage of them were newcomers to the city. The major conclusion is that attitudes toward the library may have an important influence on public library use.

Fussler, Herman A. and J. L. Simon. Patterns in the Use of Books in Large Research Libraries. Chicago: University of Chicago Press, 1969.

This book describes an investigation of statistical procedures for predicting with reasonable accuracy the frequencies with which groups of books with defined characteristics are likely to be used in a research library. The study emphasizes the ever-increasing size of research libraries and the possibility of cutting library costs by moving little-used materials to compact storage. Much of the study focuses on the feasibility of determining cheap and reliable rules for deciding which volumes should be sent. The authors measure reliability primarily in terms of the ability to predict those volumes which will be used least in the future. The most reliable prediction of the use of monographs for libraries with circulation records going back 20 years was the length of time since the last circulation (or accession).

Gardiner, G. L. "The Empirical Study of Reference." College and Research Libraries, 30(March 1969), 130-55.

This study reconstructs four empirical studies of reference: Dorothy Cole, "An Analysis of Adult Reference Work in Libraries;" Paul Breed, "An Analysis of Reference Procedures in a Large University Library;" Saul and Mary Herner, "Determining Requirements for Atomic Energy Information from Reference Questions;" and G. Carlson, Search Strategy by Reference Librarians. It contends that the principal notions on which these studies are based are deficient. The study concludes that the empirical interpretation of the conventional concept is fruitless as a framework for the development of the empirical study of reference. The article suggests that reference is a special case of problem solving and proposes a new framework (protocol analysis) for the empirical study of reference.

Gelfand, Morris A. "Techniques of Library Evaluators in the Middle States Association." College and Research Libraries, 19(July 1958), 305-20.

"This study concerns itself primarily with the techniques currently used by library evaluators in the Middle States Association of Colleges and Secondary Schools. It deals also with library evaluation, general institutional evaluation, and accreditation by the Association in order to provide appropriate, indeed necessary, background for better understanding of the task of the library evaluator." The author emphasizes that the effectiveness of the outside evaluation, in large part, depends upon the quality of the self-evaluation which the institution is encouraged to make.

Goldhor, Herbert, ed. Research Methods in Librarianship: Measurement and Evaluation. Urbana: University of Illinois. Graduate School of Library Science, 1968.
Beasley, Kenneth E. "A Theoretical Framework for Public Library Measurement," 2-14.

After an opening discussion on the interrelationship of standards and a statistical reporting system, the author presents a formula for potential public library service and then explains the development of the various elements of the formula. The author is convinced that such consideration of the quantifiable elements of library service is necessary if there is to be any real breakthrough in developing meaningful standards.

Armstrong, Charles M. "Measurement and Evaluation of the Public Library," 15-24.

The author describes the major problems encountered in measuring public library services. Most of his data and examples are drawn from the New York State User Survey. He argues that the basic elements of a good measurement include assurance that a measurement really defines a good library, understanding the difference in use among different kinds of people, realizing the importance of unit costs, and awareness of the need for new measures to reflect the new problems of systems and the resulting cooperative relationships. He concludes that careful development and consideration of the various modes of measurement can contribute materially to the success of library planning in spite of the many deficiences and defects still existing in those modes.

Hamburg, Morris, Leonard E. Ramist and Michael R. W. Bommer. "Library Objectives and Performance Measures and Their Use in Decision Making." Library Quarterly, 42(January 1972), 107-28.

The authors argue that for optimal allocation of limited funds, it is necessary for libraries to develop measures of output (benefits). Various forms of user exposure to documents are discussed in an effort to develop such measures for public libraries. It is suggested that the accrual method of accounting be used to compare such measures with costs, and an illustrative computation is presented. It is shown how size of user population, amount of exposure, and costs for a given year can be estimated. Similar techniques are suggested for evaluation of library programs. This approach is then compared with current concepts of library standards. The paper concludes with suggestions for further research.

Hamburg, Morris, et al. A Systems Analysis of the Library and Information Science Statistical Data System: the Preliminary Study. Interim Report. Philadelphia: University of Pennsylvania, 1969. ED 035 421

The long-term goal of this investigation was to design and establish a national model for a system of library statistical data. This is a report on the Preliminary Study which was carried out over an 11 month period. Its objective was to design and delimit the Research Investigation in the most efficient and meaningful way. The Preliminary Study concentrated on (1) the background research required to determine the nature and relevance of previous and ongoing research in this field and (2) the design of the Research

Investigation. The Preliminary Study included a literature search and review of relevant research; interviews with a variety of librarians, officials of library associations, government officials, and university researchers, and other activities relevant to the construction of the design of the Research Investigation. This final report primarily consists of a proposal for the Research Investigation and a summary of a background study on "Statistical Measures Required for Library Managerial Decision Making Under a Planning-Programming-Budgeting-System (PPBS)."

Henne, Frances. "Standards for Media Programs in Schools." Library Trends, 21(October 1972), 233-48.

The succeeding standards from 1945 to 1969 are analyzed, pointing out how they are integrated into the school programs. Objective of the standards is defined as providing teachers and students with the media services and resources to which they are entitled.

Hershfield, Allan F. and Morrell D. Bone, eds. "Approaches to Measuring Library Effectiveness: a Symposium." Syracuse University, 1972. (Frontiers of Librarianship, No. 14).

The speakers each felt that it is possible to measure effectiveness. All libraries currently measure administratively convenient data. What is needed is to measure data in an interactive environment of use and time.

De Prospo outlined the methodology to be used at Rutgers and presented arguments for use of statistical approach. Taylor stressed the dynamic nature of service, emphasizing measure of use, time and success. Daugherty brought up the role of staff in the effective uses of libraries.

Running through the symposium was a feeling that the function of a library has changed from a collection depot to an information resource element, and that we need to look at how and why it is used. The institution is to communicate with its users in a dynamic fashion necessitating the use of new measures for testing its effectiveness in the community.

Hirsch, Felix E., ed. "Introduction: Why Do We Need Standards?" "Standards for Libraries." Library Trends, 21(October 1972).

Mr. Hirsch defines standard and guideline.

The existence of standards have brought about an improvement in opportunities for all libraries.

"How to Test Your Library." Library Association Record, 72(February 1970), 49-52.

This is an article reprinted from What? and represents an outside view of library services. It details what the average user should be able to expect from a public library in the following areas: (1) spending on books, (2) reference books, (3) how many libraries, (4) staff, and (5) what to look for in a library (hours, circulation policies, etc.). The article also reports the results of a questionnaire completed by 38 libraries in England. All of the libraries were rated on their distance, hours, reference books, readers advice, staff and cost.

Humphreys, K. W. "Standards for Libraries in Great Britain." Library Trends, 21(October 1972), 312-29.

Libraries in Great Britain have been organized into the British Library. The various kinds of libraries and the bodies with whom they are affiliated are discussed. An awareness of the difficulty of writing standards is indicated, with some of the quantitative measures for various kinds of libraries included.

Illinois Library Association. Public Library Section. "Measure of Quality: Standards for Public Library Service in Illinois." Illinois Libraries, 54(February 1972), 131-46.

Recognizing the need for statewide standards, both quantitative and qualitative, the Public Library Section of the Illinois Library Association attempted to list the minimum facilities and the services which any citizen might logically expect when he utilizes the services of the public library. The committee's recommendations, which are followed by standards, were not developed for branch libraries, bookmobiles, library systems headquarters, or other such units.

Jain, A. K. "Sampling and Data Collection Methods for a Book Use Study." Library Quarterly, 39(July 1969), 245-52.

The purpose of this article was to describe the methods of sampling and data collection for a book-usage study in a research library. Various methods of sampling usually used were described, and then the author's method of measuring "relative use" was described. The relative use method involves the sampling of the total collection, the sampling of check-outs for home use, and the sampling of in-library use. The author concludes that the relative use method gives more precise estimates than the collection method.

Jain, A. K. "Sampling and Short Period Usage in the Purdue Library." College and Research Libraries, 27(May 1966), 211-18.

Several possible methods of sampling the social science monograph titles in the general library of Purdue University were considered, and the "relative usage" method was used to obtain estimates of their usage in the library and at home for a five-week period. Relative usage was used to study the effect of language, country of publication, year of publication, and year of accession of a monograph title.

A questionnaire was employed to study the usage of library facilities and to gather opinions of library patrons. Purpose of visiting the library, reason for checkout of library material, reason for preferring library or home use of library material, etc., were analyzed on the basis of the replies received.

Jones, Arthur. "Criteria for the Evaluation of Public Library Services." Journal of Librarianship, 2(October 1970), 228-45.

The author argues that the evaluation of public library services must be based on a clear conception of objectives. A list of objectives and questions to be answered about each are suggested. He also notes that the provision of resources can most easily be quantified and evaluated statistically and then be compared with standards and norms. These are tabulated for a number of aspects of public library service; buildings, mobile libraries, expenditures, book stocks, and book purchases.

"A notable omission is the whole complex question of the evaluation of 'output.'" The author still hopes, however, that the paper may assist librarians in the evaluation of their own libraries.

Kaiser, Walter H. "Statistical Trends of Large Public Libraries, 1900-1946." Library Quarterly, 18(October 1948), 275-81.

A summary of selective data reported by large public libraries in the United States from 1900-1946. Figures are presented on circulation, expenditures, volumes per capita, average population, book stock, expenditure per volume circulated, per cent of total population registered as borrowers, circulation of books per borrower, per cent of juvenile circulation of total circulation, percentage distribution of expenditures, average number of branches and subbranches, level of American business activity, and school expenditures. The author notes that an adequate program for collecting and reporting statistics is needed.

Krikelas, James. "Library Statistics and the Measurement of Library Services." ALA Bulletin, 60(May 1966), 494-9.

The article opens with a brief look at the history of library statistics and the measurement of library services. The author notes that the attempts to establish a uniform statistical report form for all types of libraries were never fully successful.

He argues that it is more important to inquire into the nature of library service to determine what measurements have meaning than to attempt to give meaning to the measurements that are currently being undertaken.

The author concludes that no obvious measurements can be made to determine how effective the library is in providing the services necessary to meet its objectives, and there is no obvious way of applying uniform measurements to libraries which are serving diverse objectives. But regularly compiled data and the publication of descriptive statistics can be useful for indicating national trends, as a rough indication of library activity, and within limits, as a basis of comparison of libraries.

Löhmann, Otto. "Efforts for International Standardization in Libraries." Library Trends, 21(October 1972), 330-53.

Cooperation can be attained only through the implementation of standards. While there is great diversity within each country there is an even greater diversity among them. The author describes the work being done thru IFLA to facilitate standardization and the impact of technology in libraries throughout the world.

State library statistics are the most important instrument for directing and managing libraries. Since 1932 IFLA has attempted to work out comparable international library statistics depending on uniform principles, such as standardization of terminology. Standardization is necessary because of electronic data processing machines in libraries.

The Long-Range Plan of the Michigan Department of Education for Library Services throughout the State. Michigan State Department of Education, Lansing. Bureau of Library Services, 1972. ED 070 486

The State Library Program for future services to the citizens of Michigan includes: (1) a discussion of premises on which the plan is based; (2) the plan with its goals, objectives, and implementation strategies; (3) a description of the existing delivery system within the State Library; (4) a discussion of the evaluation procedures to measure library services and programs (including output and performance measures); and (5) an appendix of data, survey, charts, and publications which reinforces, supports and/or more fully illustrates the plan. Structurally, the plan orients itself around four broad goals. Under each goal, numerous objectives are delineated to insure complete coverage in every possible area, and implementation strategies are listed which, when implemented, will successfully achieve the appropriate objectives and broad goals.

Long-Range Program, Hawaii State Library Systems; 1973-1978. Hawaii State Department of Education, Honolulu. Office of Library Services. ED 069 319

This program is based on and is a continuation of the needs assessment as listed in the Booz, Allen, Hamilton study of Hawaiian libraries, which also provided a basis for systematic library planning in Hawaii. It describes the operation of the Office of Library services. Geographical setting and political and economic characteristics of the state are described with implications for the growth of Hawaiian libraries.

The program includes a statement of the measuring of the effectiveness of library services. It provides for planning of evaluation, so that data received can be utilized in the modification of existing plans and development of new programs.

Full statements of plans for LSCA Title I, II, and III funding are given and explained. A part of Hawaii's future lies in the federal granting of the money for these long-range and well-generated plans for Hawaii's information network.

McDonough, Roger H. and David C. Palmer. "Standards for State Libraries." Library Trends, 21(October 1972), 178-89.

LSCA funds forced the development of state library standards. The libraries in each of the states vary widely in administration, in function and in purpose. Standards are directed at the functions performed by the state agencies. State library standards are really criteria or guidelines; there is no such thing as a standard state library.

Maizell, R. E. "Standards for Measuring the Effectiveness of Technical Library Performance." Institute of Radio Engineers Transactions on Engineering Management EM-7, 1960, p. 69-72.

In this paper established criteria are reviewed and new criteria are proposed in order to evaluate the performance of the technical library. Evaluation is desirable because of the increasing expensiveness of library programs, and because it could be the basis for administrative and budgetary decisions. The author proposes a five point evaluating program consisting of (1) developing norms with which a comparison can be made; (2) evaluation of the journal and book collection; (3) study of the effectiveness of the reference services; (4) development of an index of effectiveness defined as the ratio of material used to material demanded; and (5) determining the impact of the library and its personnel on the research program and personnel. This last point, according to the author, is the most important single factor in evaluation. For if the library can effectively meet requests for materials and information, save laboratory funds and contribute to the solution of difficult research problems, then it becomes an indispensible tool for the researchers. Unfortunately, this criterion is most difficult to evaluate, but extensive interviews and observations are the suggestions made to help ease this problem.

Martin, Allie Beth. A Strategy for Public Library Change: Proposed Public Library Goals-Feasibility Study. Chicago: American Library Association, 1972.

The purpose of the Goals-Feasibility Study is to answer the question "What is the state of the library today and what should it be in the last quarter of this century?" First, problems of the library were identified--for instance, new patterns of service are needed to meet the needs of the aging, disadvantaged, handicapped, etc.; new ways of serving rural populations are needed; the imbalance in library support between city and suburb needs to be rectified and new techniques are needed to speed information to users. In order to find answers to these problems, questionnaires were sent to librarians, library leaders, selected non-librarians, and 60 libraries in the original Public Library Inquiry. The librarians responses were concerned with three major goals of the library: (1) to provide service to all, (2) provide information services, and (3) provide adult continuing education. Important goals for the next decade for libraries include this four part plan of action: (1) A publication and a documentary film is needed to focus attention on the public library as an active community agency meeting the real needs of the people. (2) Research is needed for knowledge of more effective performance. (3) Widespread coordination and dissemination of the knowledge found through research is needed and real-life applications need to be developed. (4) Librarian's education needs to be continued and an intensive educational effort made in library schools themselves.

Martin, Lowell A. Library Response to Urban Change. Chicago: American Library Association, 1969.

This project is the third in a series of studies of the Chicago Public Library. It proposes the keyword of "adaptability" as the library's byword for its future in the city. In order to attain "adaptability," the study proposes internal reforms and new goals to enable the library to reach its full potential in serving the changing needs of Chicagoans.

The author does not rely on his evaluation alone, but calls in experts to help analyze the library and make recommendations for its improvement. Innovative techniques were used in this analysis which took a little more than a year to accomplish. A thorough study (statistical) was made of the people, their incomes, life style and population distributions in this metropolitan area. User studies were performed, branch libraries were visited and studied, the main building was analyzed, its collection evaluated, staff surveys were conducted, financing and administration was investigated. The resulting report presents reasonable, practical, well-researched and documented conclusions and recommendations (for a plan) for CPL through 1980.

Martin, Lowell A. "Standards for Public Libraries." Library Trends, 21(October 1972), 164-77.

The National Standards of 1933, 1943, 1956 and 1966 are discussed. The early standards relate to individual libraries and the later ones to cooperating groups of libraries. In 1956, budget became a determining indicator.

For the future, standards should be developed that rest upon fresh concepts suited to the conditions which have emerged at the time they are issued. In short, libraries are dynamic institutions and the reports issued should reflect this. "Useful standards can be formulated; reasonable measures of achievement can be devised, if one knows what they are being devised for."

Mathematica. On Library Statistics, Submitted to the National Advisory Commission on Libraries. U. S. Office of Education. Bureau of Research, 1967.

Recent, accurate statistical data for libraries is to be found only for college and university libraries. This report suggests that reliable information on libraries which "are an important element in the nation's educational, cultural and research equipment" is a high priority. They suggest a systematic approach to the collection of the right kinds of statistical data needed for rational planning and decision-making. A centralized data collection point, e.g. the Federal Government, is the most efficient means to the goal of good quality data. They make three suggestions for the establishment of this kind of data for librarians: (1) A publication be established which would be an annual compendium of library statistics. Engage a permanent staff to specialize in these statistics; standardize the report format so that users can become familiar with it. (2) Select a sample of libraries whose statistics can be relied on, and use these annually. Design the sample to include all sizes and types of libraries. (3) Collect data which can measure current capacity of library buildings and reveal the rate at which reserve space is exhausted. This is essential for rational planning of capital construction for libraries.

Mikhailov, A. I., ed. Problems of Information User Needs. ED 081 456

This volume's thesis is to "include articles that could reflect the wide range of problems dealing with information needs and different practical approaches to their solution." The first article takes a historical approach to the development of scientific information activities as a whole and to the interaction between the information generative process and its organization for use. The author feels that social demand for information and user needs have played a decisive role in the development of information activities.

The third author's concern is "Information Systems and Information Users." Here are raised some interesting and important problems concerning information systems, such as the importance of forecasting the development of information requirements and designing appropriate models.

Another article discusses meeting user needs with the aid of S.D.I. systems, and the final paper is based on research done at two Cracow higher school libraries on information user needs. The authors recommend that librarians should be acquainted with the educational process and cooperate with the teaching staff so that they might obtain a better understanding of the reference needs of the students.

Millett, John D. Management in the Public Service: the Quest for Effective Performance. New York: McGraw-Hill, 1954.

The author has presented a wide variety of problems which must be solved in order to achieve effective performance in the public service. He does not agree that an organization exists in and of itself; rather he proposes that unless an organization contributes to fulfilling some basic public service to a large majority of the citizenry, then there is no justifiable excuse for the organization's existence. Effective performance is a much to be desired goal and in order to realize this goal certain qualities must be apparent: satisfactory service, responsible performance, and good government. The author realizes that the above three qualities or values must be discussed, modified and interpreted to fit various conditions, but without them management in the public service has no meaning.

Morse, Philip M. "Library Models." In A. W. Drake, R. L. Kenney and P. M. Morse, Analysis of Public Systems. Cambridge, Massachusetts: MIT Press, 1972, p. 235-56.

The current problems of the economy have caused many financial worries for libraries and has necessitated a change in their decision-making policies. The author of this article feels strongly that library administrators must analyze library operations quantitatively and devise models to represent and predict their behavior. The best models, according to Morse, are those which are easy to utilize and require the least amount of manhours to collect the data. He suggests using circulation figures or book card analysis as input for the first models designs. These would be implemented by taking small random samples at regular intervals and inserting this data into the formula of the model. The results should provide useful means of evaluating a library's performance, thus making it easier for the administrators to evaluate the performance of new policies and revise their plans in accordance to this performance.

Murray, Florence B. "Canadian Library Standards." Library Trends, 21(October 1972), 298-311.

Changes in governing bodies in Canada in the 1950's have been parallelled by changes in the structure and goals of the libraries. The standards issued in 1967 are written in qualitative rather than quantitative terms. Library systems have evolved into a rudimentary network. Canadian librarians are aware of what is happening in the U. S., but write standards to meet their specific goals and needs.

National Center for Education Statistics. Statistics of Public Libraries Serving Areas with at Least 25,000 Inhabitants, 1968. Government Printing Office, 1970.

This survey is one of the series of selected statistical data for public libraries collected by the United States Office of Education since 1944. The basic reporting unit considered here is the "independent, locally automonous library as an independent unit." Therefore, public library systems are not included, and the areas served by the public libraries must have at least 25,000 inhabitants to be in this survey. The report itself is based on two questionnaires given by USOE and covers 1,057 libraries in 49 states. (Georgia did not participate.) Tables included in this report are: population served, operating expenditures, operating receipts by source, salaries, library staff, maintenance staff, SMSA area, book stock and circulation record. Also included in the report is the actual questionnaires and instructions.

National Commission for Libraries and Information Science. A National Program of Library and Information Service. 1974.

This is a policy statement regarding libraries and the information industry of the nation and their relations with ultimate users of knowledge resources and information. It states repeatedly the need for a network so that all citizens may have access to information regardless of mode of expression or repository.

Functions and relationships of all segments of the information community should be studied and integrated: libraries, publishers, indexing/abstracting services, education--commercial--government agencies, and information industry. More needs to be done to understand the information needs of various special constituencies in the U. S.

Newhouse, Joseph P. and Arthur J. Alexander. An Economic Analysis of Public Library Services. Santa Monica, California: Rand Corporation, 1972.

Two economists attempt to develop a methodology for answering some problems that public libraries face. With the cooperation of the staff of the Beverly Hills, California, Public Library, the problems of allocation of book budget, collection development, cost studies of circulation systems and security systems are all analyzed by their methodology (user and community surveys).

They discover that the cost/benefit ratio differs among various classes of books. The books with high cost/benefit ratios in this library are mysteries, preschool and young adult fiction, and psychology books. They suggest, at the judgment of the librarian, that the book budget be increased in these areas to benefit the community.

They discover that households with children in this community use the library the most. And that a two week book checkout period increases the satisfaction in finding books in the library to 2/3. The method they use to determine the cost of reference services is easy to obtain, and they suggest it should be collected regularly. They suggest many ways librarians can study their own special problems and provide clear alternatives to consider.

Nie, Norman, Dale H. Brent and C. Hadlai Hull. SPSS: Statistical Package for the Social Sciences. New York: McGraw-Hill, 1970.

This manual is a complete instructional guide to statistical packages for the social sciences (SPSS). This computer package program was designed so that the social scientist researcher could, through use of SPSS, manipulate and analyze his data easily. Page viii of the introduction to this manual explains SPSS as "an integrated system of statistical programs embedded in a series of common procedures for management and handling of complex data files." Through use of natural-language control statement, a researcher with no previous programming knowledge can perform complex analysis such as partial correlations, multiple regressions, factor analysis, etc. on his data. The language used for SPSS is Fortran IV, an almost universal language in the computer world. This and the fact that the two computers SPSS was developed on (IBM 360 and CDC 6000) are in wide use in most universities, will hopefully result in the long life of the SPSS package in research communities.

O'Neill, Edward T. "Sampling University Library Collections." College and Research Libraries, 27(November 1966), 450-4.

A description is given of two simple random location sampling techniques to be used in large library collections. The first is based on the actual location of a book; the second used the shelf list. Both methods involve numbering. The first takes all possible locations where books may be found and then systematically numbers them; the sample is then drawn easily from the number locations. The second technique first numbers all of the shelf list cards and then samples them. The sampling system found most efficient and which involved the least amount of hours was the location sampling; the shelf list sampling, based on the experience reported at Purdue University Library, was recommended for use only in special circumstances.

Oregon, 1972. ED 069 300

A plan to conduct user surveys and to investigate non-users is presented.

Orne, Jerrold. "Standards in Library Technology." Library Trends, 21(October 1972), 286-97,

The author discusses the background of the American National Standards Institute/Committee Z39 (ANSI/Z39), which deals with "Standards in the fields of library work, documentation and related publishing practices," and discusses how the committee works. ANSI/Z39 has issued a number of standards related to library technology.

Parker, E. B. and W. J. Paisley. "Predicting Library Circulation from Community Characteristics." Public Opinion Quarterly, 29(Spring 1965), 39-53.

The authors obtained the basic data for this study from the USOE 1956 survey of library circulation and from Market Statistics Incorporated, 1957. Data important to this study of use of libraries and books in the "television era" are: median education of males and females, median age in a given county, per cent white residents, per cent urbanization, per capita retail sales and buying income, mean family size, and per cent TV saturation.

Libraries were classed into ten types to account for their differences and as a control factor and then the above figures were studied for correlations. Among the more interesting findings are: (1) high correlation between circulation figures, female educational level, the area's population, and income; (2) significant relationship between population and circulation of fiction; and (3) significant relationship between income level and non-fiction use for non-fiction holdings and circulation increase per capita as population increases.

The authors feel that there is a definite problem of book stocks of libraries shaping the demand structure of a community. Non-fiction collections are less than adequate if population and income determine the circulation rate and certainly more research is needed in this area of library studies.

Penna, C. V. "Library Inspection." UNESCO Bulletin for Libraries, 23(July 1969), 170-7.

This article attempts to respond to the points raised by experts at the Antiqua Conference (Meeting of Experts on the Development of School Libraries in Central America--29 July to 2 August 1968.) The necessity of library inspections and constant evaluations are the topics of discussion here. The author feels that the main cause of failure of the best plan of library service improvement and expansion could be from lack of inspection. Inspection must relate to both the user of the library and the social institution to which the user belongs. For if the user understands library policy, the methods in use at the library, and the service provided, then he can make suggestions for that library inspector. He is the liason between the library and the authorities. He keeps up to date with new research ideas, he briefs librarians on innovations, trains them and sees that upkeep of materials and equipment is properly maintained. An inspector should be a highly competent, well-read individual with leadership qualities and most especially, specially trained to be an inspector.

Library inspectors are an important link in the process of extension of library services by state grants. If this money is to be well spent, then numerous well-trained inspectors are the answer.

Pings, Vern M. "Development of Quantitative Assessment of Medical Libraries." College and Research Libraries, 29(September 1968), 373-80.

This is a summary report of a project supported by the National Library of Medicine to try to define methods that would help to evaluate the national biomedical complex as a system. Since it was not possilbe to study this system as a whole, the approach of a user of the library's services was considered. The question to be answered was "as a user of this library, what is the probability of obtaining a document or citation I want in a certain amount of time."

A methodology that is applicable to all biomedical libraries was developed. It must be easy enough for the staff of each library to perform, and the results must have meaning to users, librarians and administrators.

Methods for testing an academic research medical library's ability to provide document delivery to its patrons, simple fact answers and document delivery by interlibrary loan, and to verify and correct citations for its clientele are presented.

A random alarm device was developed which can be used to gather statistics randomly. Many uses are forseen for this method.

Pinzelik, Barbara P. Statistical Collection Simplified Within the Purdue General Library. Part I. ED 068 112

The purpose of this report is to simplify the gathering of statistics at Purdue University Library and determine if there is some relationship between two sets of time-consuming statistics gathered since 1934 at the library. The daily counts for both materials checked out for home use and materials used within the library were statistically compared for the years 1966-1971. The findings showed a high correlation between the two sets of figures, meaning that home use materials could predict library use materials. The study recommends eliminating the time-consuming tabulation by the pages of books left on tables, etc. within the library, thus saving Purdue $4,500 annually and freeing the book shelvers for other tasks.

Poole, Frazier G. "Performance Standards and Specifications in the Library Economy." Library Trends, 11(April 1963), 436-44.

When there is a definite need for library performance standards, one should check the contributions of the Library Technology Project. Since librarians are consumers, carefully developed performance standards can help them make better, more economical purchases of library equipment and supplies.

The article traces the history of library standards and then discusses the time, effort, expense and cooperation necessary to develop an effective standard. After the standard is tested, it must be agreed upon by an "authority," either a national professional association, technical society or manufacturer. Effective use of these performance standards result in (1) healthy competition, reducing the price of the goods and (2) improvement in the quality of the goods. Both results are favorable for the consumer-librarian.

Pritchard, Alan and others. Library Effectiveness Study. May 1973. ED 089 761

This is an investigation of user demands, satisfaction and the kinds of services provided at four libraries. Statistics were collected on the usage of the library by various groups and on the usage of various materials. The users in this study were the students and faculty.

Measured were:	Items used per time period, Total population possible, Total number using the library.
Questionnaire:	Number of questions asked, Number of satisfactory answers supplied, Users who did not ask questions but used the library as a study or for social purposes or other.

Raffel, Jeffrey and Robert Shishko. Systematic Analysis of University Libraries: an Application of Cost-Benefit Analysis to the M.I.T. Libraries. Cambridge, Massachusetts: M.I.T. Press, 1969.

In the forward to this volume, Fred Charles Ikle credits the authors with the first use of a cost-benefit analysis in a university library. The first step taken in this analysis is to outline the mission of the M.I.T. libraries which are to provide material for course work and to support research. The problem then is how to organize future library resources into a set of programs that best fulfill the above objectives. Part of the solution is to be found in drawing up a program budget for the M.I.T. libraries. Here, when outputs are related to inputs, it becomes possible to identify trade-offs between program activities. For instance, M.I.T. spends as much money cataloging books as buying them. Is there another answer to this expenditure?

All the budget inputs are studied in turn for viable alternatives, and then a user survey is constructed which asks the participants to pick and choose among various hypothetical budget categories the services they would most like to see in their library and the services they would alter or do without.

The survey of the faculty and students, since it provided them with alternatives, may provide new insights into the preferences of these groups. The results of a systems-analysis are given, including use of survey research, program budget and user surveys. This provided useful and usable information to the decision-makers at the M.I.T. libraries.

Rather, John Carson and Nathan M. Cohen. Statistics of Libraries: an Annotated Bibliography of Recurring Surveys. Washington, DC: U.S. Office of Education, 1961.

This bibliography is a detailed index of sources of library statistics. The editors foresaw a need for the easier accessibility of statistical material to librarians, administrators, and the public in making evaluations, planning research, and measuring the performance of libraries, so this annotated bibliography was prepared. The 156 citations given here are divided into two parts. First come the national and regional citations, then the state. All of the primary data is given for each citation, and the frequency of publication is noted. This bibliography does not give annual reports or sources which only cover one library. It, instead, tries to identify large sources of library data and looks to the future for more publications in the same area.

This publication reveals the paucity of library statistics in some fields, and the difficulty of locating and identifying other sources. However, the purpose of this volume is to bring researchers and librarians closer to the available sources of library statistics and make their bibliographic task a bit easier.

Report on Library User Survey, 1974. St. Petersburg, Florida: Management Improvement Department, 1974.

In 1974 the City of St. Petersburg conducted a two-part survey of their library system to measure the effectiveness of public services. A survey of usage of facilities, circulation, title availability, patterns of reference use, scheduling of public service personnel and user characteristics comprised one part. The other part was a questionnaire which was given to 663 library patrons. Methodology and results are given.

Rockwood, Charles E. and Ruth H. Rockwood. Quantitative Guides to Public Library Operation. Illinois. University. Graduate School of Library Science. Occasional Paper No. 89, 1967.

This article investigates five measures--population served, size of staff, volumes, circulation, and total budget--in an effort to find a reliable guide of comparison between libraries.

The study concludes that budget seems to be the most reliable basis for measurement, but points out that public libraries vary tremendously in the amount of money they have to spend as well as the way in which they spend it. The community environment also makes a big difference.

The authors indicate the measures are inadequate for measuring or comparing the very largest libraries such as New York Public and Chicago Public. The measures may also not be an indicator for very small libraries, that is, those serving populations of 35,000 or less. Here they found they had too little information to draw a conclusion.

This study, the authors felt, was in the nature of a preliminary investigation of the problem; "statistical refinement of available data on public library operations is so inadequate that much more needs to be done before one even knows what statistical questions are the right ones to ask."

Rogers, Rutherford B. "Measurement and Evaluation." Library Trends, 3(October 1954), 177-87.

This article details shortcomings of circulation and reference statistics as a means of evaluating library service. It concludes with a hope that statistical methods being developed may overcome some of these shortcomings.

Rosenberg, Kenyon C. "Evaluation of an Industrial Library." Special Libraries, 60(December 1969), 635-8.

Rosenberg believes libraries, especially those in Special Libraries with which he is familiar, need to come up with a dollar type of evaluation to justify their existence in a comparative way. He asks the question: "What is it that libraries are supposed to do?" He suggests that the usual statistics be kept, but that a weighted factor be added for the importance and value of the service. This would be obtained by user feedback.

For a service, such as a literature search, reference question, bibliography, etc., a sample of the patrons would do an evaluation. How much time the task took is compared with how much time the task would have taken if the individual wanting the information had done it himself.

The difference in time and the cost of the library's time vs. that of the patron is compared. Services can thus be evaluated in dollar terms.

Rothstein, Samuel. "The Measurement and Evaluation of Reference Service." Library Trends, 12(January 1964), 456-72.

The problems in evaluating reference service are discussed; chief among them is the problem of defining it. A number of studies are categorized and evaluated briefly. An extensive bibliography accompanies the article.

Salverson, Carol A. "Relevance of Statistics to Library Evaluation." College and Research Libraries, 30(July 1969), 352-61.

Statistics as now collected by libraries are static measurements. As such they are of little value in measuring either the effectiveness or efficiency of the library. The concept of the library as a dynamic system is developed with suggestions for collecting statistics as a criteria for evaluation of that dynamism. A number of provocative questions are posed with a solution based on new statistical analytic tools being used for their resolution.

Schick, Frank L. "Coordinated Collection and Individual Use of Library Statistics." Library Trends, 13(July 1964), 117-25.

A brief history of the use of statistics is given. Schick argues for standards and compatibility in statistics. As systems and networks develop, it is necessary that statistics be comparable. Regarding performance measures, he says, "Measuring of performance is most difficult because 'use' questions concerning circulation, registration of borrowers, or the answering of reference questions are considered increasingly inadequate yardsticks; they are still used because better use indexes have remained unexplored."

Schick, Frank L. "The Evaluation of Library Resources by Standards and Statistics." In National Inventory of Library Needs. Chicago: American Library Association, 1965.

ALA standards are used as the measure for evaluation of needs. Statistics were compiled by questionnaire. The standards were compared with actual practice and the growth was charted over a period starting with 1960. Future needs were projected.

Sewell, P. H. "Evaluation of Library Services in Depth." UNESCO Bulletin for Libraries, 22(November/December 1968), 274-80.

This was written for libraries as a guide for evaluating library service. Objectives are set and standards are used as a guideline to measure the objectives.

Static types of statistics are needed even though they give only a crude indication of efficiency. To evaluate it is necessary to look for significant links between different sets of figures and supplement the data by on-the-spot observation and analysis. It suggests using statistics of the collection--ratio of books owned to books circulated (preferably by type).

Slamecka, Vladimir. "A Selective Bibliography on Library Operations Research." Library Quarterly, 42(January 1972), 152-8.

The bibliography covers the use of the scientific method to solve management problems over the period 1955-1970. Four categories are listed: general, mathematical programming, modeling and systems analysis.

"Standards for Reference Service in Public Libraries." Library Association Record, 72(February 1970), 53-7.

The present standards for volumes added per year, area, shelf capacity and seating are listed. Standards for reference services material (nature), organization, staff (qualification, experience, salary), and means (collection, telephone, Telex, photocopying) are proposed.

The appendix lists standards for four types of libraries and population served: A--over 300,000; B--100,000 - 300,000; C--40,000 - 100,000; D--under 40,000.

Tauber, Maurice F. and Irlene Roemer Stephens, eds. Library Surveys. New York: Columbia University Press, 1967. (Conference on Library Surveys, Columbia University, 1965.)

This was a general conference on all aspects of surveys in public, school, state, special and academic libraries. Part One relates use of the survey method and various areas of service; Part Two covers special approaches and problems.

Tauber, Maurice F. "Survey Method in Approaching Library Problems." Library Trends, 13(July 1964), 15-30.

The extent of library surveys is discussed and divided into four categories: nature of the survey method, approaches of the survey, limitations of surveys, and results of the survey approach. Surveys analyze existing conditions. Implementation of their findings determines their effectiveness.

Thompson, John I. Criteria for Evaluating the Effectiveness of Library Operations and Services. 1967-68. 3v.(ATLIS reports nos. 10, 19, 21). Washington, NTIS.

The purpose of this study was to develop criteria for evaluating technical library operations and services, covering technical services and user services. Part One is a literature search covering all facets of library management and services. Most of the bibliography is concerned with standards and the state-of-the-art.

Vol. I is general.

Vol. II is directed towards the Army Technical Libraries, to establish criteria to evaluate their operations and services.

Vol. III lists four techniques for evaluating technical libraries--all are concerned with procedures and cost effectiveness and while useful for management purposes, they do not evaluate qualities of service to the public served. Evaluation is in terms of time spent in various operations and is related to cost. It is useful in finding out how the staff spends its time and how long a task may take. It does not seem to be readily applicable to public libraries.

Thompson, Lawrence S. "History of the Measurement of Library Service." Library Quarterly, 21(April 1951), 94-106.

Early statistics related only to holdings. By the turn of the century scholars were asking about the nature of the collection and service. Once it was accepted that items be counted, it was then necessary to establish standards. This movement was well under way when the article was written.

The article concerns the history of all libraries in all countries. The German-speaking countries were the most statistically or number orientated. French, English and American libraries in this survey are also discussed.

Trezza, A. F. and James Beasley, eds. National Conference on Library Statistics, 1966. Chicago: American Library Association, 1967.

This conference was held in order to impress upon librarians the importance of having sound statistical backing for their library. Statistics are needed to give support to legislation asking for more library aid; positive statistics are needed to show how federal grants actually helped libraries in the past. The last point is important because there is a distinct possibility of federal money becoming tight in the future. If libraries can prove that their goals are in conjunction with other educational institutions that benefit society at large, then this can only improve their case for more federal monies. Also, for state and local financial support, librarians must be aware of the importance of sound figures to make local officials aware of library needs. A librarian, therefore, needs a wide range of skills in management, information transfer, communication, etc., in order to accomplish these objectives. The appointment of a National Advisory Committee on Library statistics was recommended to work on a national plan to accomplish the goals discussed at this conference.

Trueswell, Richard W. "A Quantitative Measure of User Circulation Requirements and Its Possible Effect on Stack Thinning and Multiple Copy Determination." American Documentation, 16(January 1965), 20-5.

Using last circulation date, a method is given for keeping the active collection size manageable and useful. The article is also concerned with the need for multiple copies of heavily used materials.

Trueswell, Richard W. "Some Behavioral Patterns of Library Users: The 80/20 Rule." *Wilson Library Bulletin*, 43(January 1969), 458-61.

A characteristic of business is that 80 per cent of the transactions represent 20 per cent of the items stocked. Does this hold true for libraries? The author finds that it does, leading to the suggestion that techniques used for managing business inventories are applicable to libraries. This pattern can have meaning in regard to weeding, core collection development and for determining what the users of a library are reading.

Trueswell, Richard W. "User Circulation Satisfaction vs. Size of Holdings at Three Academic Libraries." *College and Research Libraries*, 30(May 1969), 204-13.

A method using date of last transaction as a parameter for defining and predicting library circulation patterns and building a core collection is described.

Urquhart, J. A. and J. L. Schofield. "Measuring Readers' Failure at the Shelf." *Journal of Documentation*, 27(December 1971), 273-86, and 28(September 1972), 233-41.

The study outlines title availability failure in testing books known to be held by the library against their availability when desired by a reader. The methodology and results of the survey form the major portion of the paper.

The primary cause of failure to locate the book was that it had already been borrowed. The same titles seem to be in demand by users regardless of level of study; undergrads, grads and faculty competed for the same works.

(The second citation is a continuation of the work of the first in three other libraries.)

Wallace, James O. "Two-Year College Library Standards." *Library Trends*, 21(October 1972), 219-32.

The problem of writing the standards for two-year colleges is bound in with the growth, diversity and multiplicity of the institutions. Standards written in 1960 assisted in securing funds to improve collections and services. Since 1960 many changes have taken place requiring that new standards be written. The 1972 draft does not have qualitative measures and are quidelines rather than standards, emphasizing programs.

Warncke, Ruth. "Library Objectives and Community Needs." *Library Trends*, 17(July 1968), 6-13.

The objectives of library service as seen by librarians has varied; during the period 1850-1890 the emphasis was on moral judgment, in the period 1930-1950 vocational improvement became a major goal, while community development became a major concern beginning in 1957.

The collections developed and services offered reflect the librarians' concept of their objectives and goals. Libraries are becoming more and more involved in their total community, working with and through groups to meet the needs of the wider community.

Libraries are quality oriented, and this is evident through the level of cultural event and materials they have collected and promoted. Programs are now concerned with national problems, seldom with the immediate community.

The objective of continuing education is revealed in only a limited way in some libraries. The educational work carried on is often based on unexamined assumptions, and analytic study is urged.

Watkins, David R. "Standards for University Libraries." Library Trends, 21(October 1972), 190-203.

There is no standard for university libraries. Several approaches have been made by ARL and ACRL. The library in a university should be viewed as an integral part of the university and standards drawn for one library will be different from that of another. The various regional accrediting bodies have different standards for the libraries in their jurisdictions. It may be that there should be several standards for universities of various sizes.

Yast, Helen. "Standards for Library Service in Institutions: in the Health Care Setting." Library Trends, 21(October 1972), 267-85.

The concern with standards in hospitals goes back to 1938. Health-care libraries include service to patients, staff and administration. Quantitative standards were the most frequent type. In 1970 the emphasis changed and quantitative criteria were eliminated; service was stressed.

ADDITIONAL REFERENCES

"Aggravation Quotient: Search Time/User Time." *In Innovative Developments in Information Systems: Their Benefits and Costs, Proceedings of the American Society for Information Science*, Vol. 10, 36th Annual Meeting, Los Angeles, California, October 21-25, 1973, Washington: ASIS, 1973, p. 36.

American Library Association. Committee on Post-War Planning. *Post-War Standards for Public Libraries*. Chicago: American Library Association, 1943.

American Library Association. Public Libraries Division. Co-ordinating Committee on Revision of Public Library Standards. *Public Library Service: A Guide to Evaluation with Minimum Standards*. Chicago: American Library Association, 1956.

American Library Association. Statistics Co-ordinating Project. *Library Statistics; A Handbook of Concepts, Definitions and Terminology*. Chicago: American Library Association, 1966.

American Library Association. Public Library Association. Standards Committee. *Minimum Standards for Public Library Systems, 1966*. Chicago: American Library Association, 1967.

Andrews, T. "Role of Departmental Libraries in Operations Research Studies in a University Library." *Special Libraries*, 59(September-October 1968), 519-24.

Argyris, Chris. *Interpersonal Competence and Organizational Effectiveness*. Homewood, Illinois: Dorsey Press, 1962.

Atkin, Pauline. *A Bibliography of Use Surveys of Public and Academic Libraries 1950-November 1970*. ED 055 617

Beasley, Kenneth E. *Measurement of Effectiveness of Public Library Service*. Proposal for Research Submitted to the U. S. Commissioner of Education, January, 1970.

Beasley, Kenneth E. *A Statistical Reporting System for Local Public Libraries*. Pennsylvania State Library Monograph No. 3. University Park: Institute of Public Administration, The Pennsylvania State University, 1964.

Beasley, Kenneth E. "A Theoretical Framework for Public Library Measurement." *In* Herbert Goldhor, ed., *Research Methods in Librarianship: Measurement and Evaluation*. Urbana: University of Illinois. Graduate School of Library Science, 1968.

Blasingame, Ralph U., Jayne L. Hess, and Robert J. Bonner. *The Book Collections in the Public Libraries of the Pottsville Library District: A Date and Subject Distribution Study*. Pottsville Free Public Library, 1967.

Boaz, Martha. "Evaluation of Special Library Service for Upper Management." *Special Libraries*, 59(December 1968), 789-91.

Boaz, R. L. "Dilemma of Statistics for Public Libraries." *ALA Bulletin*, 63(December 1969), 1572-5.

Bolls, John S. *The Urban Central Library: Development Alternatives for San Francisco*. ED 073 792

Bourne, Ch. D. and Jo Robinson. *SDI Citation Checking As A Measure of the Performance of Library Document Delivery*. ED 082 774

Bow, E. "Library Measurement and Evaluation." *Ontario Library Review*, 55(December 1971), 249-51.

Bowker, R. R., Inc. *American Library Directory*. 28th Ed. New York: Bowker, 1971.

The Bowker Annual of Library and Book Trade Information, 1971. New York: Bowker, 1971.

Brown, A. L. "Measurement of Performance and Its Relationship for Special Library Service." *Special Libraries*, 50(October 1959), 379-84.

Buckland, M. K., et al. *Systems Analysis of a University Library*. Lancaster, England: University of Lancaster, 1970.

Bundy, M. L. "Factors Influencing Public Library Use." *Wilson Library Bulletin*, 42(December 1967), 371-82.

Bundy, M. L. "Metropolitan Public Library Use." *Wilson Library Bulletin*, 41(May 1967), 950-61.

Burkhalter, Barton R. *Case Studies in Systems Analysis in a University Library*. Metuchen, New Jersey: Scarecrow, 1968.

Bush, G. C., et. al. "Attendance and Use of the Science Library at M.I.T." *American Documentation*, 7(April 1956), 87-109.

California Public Library Systems: A Comprehensive Review with Guidelines for the Next Decade. Los Angeles: Peat, Marwick, Mitchell and Co., for the California State Library, 1975.

Campbell, Angus and C. A. Metzner. Public Use of the Library and Other Sources of Information. Ann Arbor: University of Michigan, Institute for Social Research, 1950.

Campbell, H. C. Metropolitan Public Library Planning Throughout the World. New York: Pergamon, 1967.

Carnovsky, Leon. "Evaluation of Library Services." UNESCO Bulletin for Libraries, 13(October 1959), 221-5.

Carnovsky, Leon. "Evaluation of Public Library Facilities." In Louis R. Wilson, Library Trends. Chicago: University of Chicago Press, 1937, p. 286-309.

Carnovsky, Leon. "Measurements in Library Service." In Carleton B. Joeckel, Current Issues in Library Administration. Chicago: University of Chicago Press, 1939, p. 240-63.

Carnovsky, Leon. "Public Library Surveys and Evaluation." Library Quarterly, 25(January 1955), 23-36.

Chapman, E. A., et al. Library Systems Analysis Guidelines. New York: Wiley-Interscience, 1970.

Chicago. University. Graduate Library School. Operations Research: Implications for Libraries. The Thirty-fifth Annual Conference of the Graduate Library School. Ed. by Don R. Swanson and Abraham Bookstein. Chicago: University of Chicago Press, 1972.

Churchman, C. West. The Systems Approach. New York: Delacorte Press, 1968.

Commission on Non-Traditional Study. Diversity by Design. San Francisco: Jossey-Bass, 1973.

Conference on Total Community Library Service, Washington, D. C., 1972. Total Community Library Service, ed. by Guy Garrison. Chicago: American Library Association, 1973.

Dallas Public Library. A Case for Change; A Function/Facility Study. Dallas: Dallas Public Library. ED 054 835

De Prospo, Ernest R. "The Real World of the Public Library." Speech delivered at CLEEP Conference, Wingspead, Wisconsin, April 2, 1973.

Georgopoulous, Basil S. and Arnold S. Tannenbaum. "A Study of Organizational Effectiveness." American Sociological Review, 22(October 1957), 534-40.

Hamburg, Morris, (Director), Richard C. Clelland, Michael R. W. Bommer, Leonard E. Ramist, Donald M. Whitfield. Library Planning and Decision-Making Systems. Final Report. U.S. Department of Health, Education, and Welfare. Bureau of Libraries and Education Technology, December 1972.

Hamburg, Morris, et al. A Systems Analysis of the Library and Information Science Statistical Data System. U.S. Office of Education. Bureau of Research, 1970.

Hoadley, Irene Braden and Alice S. Clark, eds. Quantitative Methods in Librarianship. Westport, Connecticut: Greenwood Press, 1972.

Houser, Lloyd J. Indices of Effectiveness of Public Library Services. (Unpublished Ph.D. dissertation, Rutgers, 1968.)

Institute for the Advancement of Medical Communication. Checklist of Library Policies on Services to Other Libraries. Philadelphia, 1968.

Institute for the Advancement of Medical Communication. Guide for Inventory of Library Policies on Services to Individual Users. Philadelphia, 1968.

Jordan, Casper L. A Call to Excellence and Innovation: A Survey of the East St. Louis, Illinois Public Library. ED 067 138

Kahn, Alfred J. Neighborhood Information Centers. New York: Columbia University School of Social Work, 1966.

Knight, Douglas M. and E. Shepley Nourse. Libraries at Large: The Resource Book Based on the Materials of the National Advisory Commission on Libraries. New York: Bowker, 1969.

Krikelas, James. Library Statistics and State Agencies. Springfield: Illinois State Library, 1968.

Likert, Rensis. The Human Organization. New York: McGraw-Hill, 1967.

Line, M. B. Library Surveys. Hampton, Connecticut: Archon Books, 1967.

Meier, Richard L. "Efficiency Criteria for the Operation of Large Libraries." Library Quarterly, 31(July 1961), 215-34.

Morse, P. M. "Measures of Library Effectiveness." The Library Quarterly, 42(January 1972), 15-30.

Orr, R. H. and A. P. Schless. "Document Delivery Capabilities of Major Bio-medical Libraries in 1968: Results of a National Survey Employing Standardized Tests." Bulletin of the Medical Library Association, 60(July 1972), 382-422.

A Plan for Countywide Public Library Service in Metropolitan Dade County. New York: Nelson Associates, 1968.

Ridley, C. E. and H. A. Simon. "Measuring Public Library Service." Public Management, 19(July 1937), 203-8.

Roscoe, John T. Fundamental Research Statistics for the Behavioral Sciences. New York: Holt, Reinhart and Winston, 1969.

South Carolina State Program for Library Development 1972-77. ED 070 487

Steiss, Alan W. Public Budgeting and Management. Lexington, Massachusetts: D. C. Heath, 1972.

Survey of Public Libraries. Summit County, Ohio. ED 065 161

A Survey of the Use of the Springfield Public Library. ED 065 137

Trump, Lloyd J. "Response" to "Trends in Learning and Education Affecting Community Library Service," by A. Harry Passow in Total Community Library Service, ed. by Guy Garrison. Chicago: American Library Association, 1973.

Warncke, Ruth. "Commentary on 'Community Library Service.'" Memorandum prepared for the PLA Standards Committee, September, 1973. Chicago: American Library Association, Typescript, p. 2.

Weiss, Carol H. Evaluation Research: Methods of Assessing Program Effectiveness. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

Wessel, C. J. "Criteria for Evaluating Technical Library Effectiveness." ASLIB Proceedings, 20(November 1968), 455-81.

Yenawine, Wayne S., ed. Library Evaluation. Syracuse, New York: Syracuse University Press, 1959.

APPENDIX A

North Suburban Library System Pilot Study

North Suburban Library
System Pilot Study

One outgrowth of the performance measures study conducted by the Bureau of Library and Information Science Research at Rutgers University and the 1973 ALA pre-conference devoted to measurement techniques was a pilot study using similar performance measures in the North Suburban Library System in Illinois. The system headquarters staff held a workshop in the spring of 1974 to describe the data collection techniques to the member librarians of the system. They were provided with manuals, user tickets, and worksheets to be used to collect data from their library patrons during a three-day period between May 6 and May 12.

The performance measures manual, Manual on the New Measures of Library Effectiveness, was based on the original manual prepared by Rutgers University, but it also included some modifications and additions. The user ticket employed by North Suburban was also its own version, but it was similar to the ones used by Rutgers and the Library Research Center at the University of Illinois. (See Appendix G, page 34 of the manual, for a copy of the user ticket employed by the Library Research Center.)

Twenty-nine libraries participated in the pilot study, and they collected a total of 45,116 user tickets. In addition to the user characteristics, they collected data in the following categories: title availability, equipment and facilities usage, in-library circulation, patterns of reference use, public service personnel and circulation analysis.

In April 1974, William Larsen, Information Librarian of the North Suburban Library System; Gerald Born, Executive Secretary of the Public Library Association; and Galen Rike, Research and Statistics Specialist of the Illinois State Library met with staff members of the University of Illinois Library Research Center.

The decision was made to contract the Research Center to assist the North Suburban Library System in the analysis of the user data and some of the performance measures data.

Subsequently, North Suburban sent all of its user tickets and summary data on in-library circulation, outside circulation, equipment and facilities average use per hour, and equipment and facilities utilization percent to the Library Research Center.

During 1974-75, the Research Center staff coded and input the user ticket data in order to tabulate and summarize the data by computer. Reports were then prepared summarizing the user ticket data for all of the participating libraries. The libraries were divided into five budget categories, so there were five different "user characteristics" reports presenting results for libraries with similar total operating expenditures. Each report gave three-day means for the following user characteristics: patrons per day, sex, age, student status, grade level, occupation, residency, staff assistance, acquisition of desired materials, library service, and length of stay. The reports also included histograms for each library giving the percent of patrons arriving and departing per hour.

In addition, correlation matrices were provided which presented Pearson product - moment correlations for the relationships between several of the performance measures variables and appropriate annual report data. One matrix gave correlations for all of the libraries in the study, treated as one large group. Five other matrices presented correlations for those same libraries divided into budget categories. Copies of the report and explanatory cover sheets were sent to the North Suburban Library System headquarters.

APPENDIX B

Letter of Authorization
from Ernest R. DeProspo

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

GRADUATE SCHOOL OF LIBRARY SERVICE•BUREAU OF LIBRARY & INFORMATION SCIENCE RESEARCH
189 COLLEGE AVENUE•NEW BRUNSWICK•NEW JERSEY 08903•201/932-7961

March 17, 1975

Mr. Galen E. Rike
Illinois State Library
201 South Second Avenue
Springfield, Illinois 62756

Dear Mr. Rike:

At the request of Mr. Gerald Born, I am hereby authorizing the use of Performance Measures for Public Libraries: A Procedures Manual for the Collection and Tabulation of Data (October, 1974) in the Illinois study. I understand you have been using the October version in training sessions across Illinois and plan to implement the full study in the near future.

I must, again, remind you and all other members of the various groups involved in the study that there are limitations both with the procedures for collecting and tabulating the data and especially in the interpretation of the "numbers" that result from the implementation of the study. We have done considerable revision of the October version and I am including a brief summary of the needed revisions as prepared by Ellen Connor Clark that reflect our experience with the first group of libraries studied in New Jersey. Philip Clark met with you on January 23 and attempted to counsel you on the problems of implementation, the limits of data interpretation and the like. I have repeatedly stressed the limitations and dangers that are possible given this type of service measurement. I remind you of them because of a recent experience we have encountered; namely. the unauthorized release of the collected data to a governmental official who is attempting to gather support for the dissolution of one of our participating libraries. By using selected figures from his pirated copy, an unfortunate situation has occurred.

Thus, while I am releasing the use of the October manual to you for use in your present study, I also wish to be on record as having advised you and members of the various involved parties that work and testing still goes on. The authors, having stated their reservations on the limits and potential dangers as well as the positive aspects of the study procedures must, at this time, be assured of your understanding of our position.

Very sincerely,

Ernest R. DePrespo
Professor

Encl.

cc: P. Clark
E. Clark
F. Altman
G. Born

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

GRADUATE SCHOOL OF LIBRARY SERVICE•BUREAU OF LIBRARY & INFORMATION SCIENCE RESEARCH
189 COLLEGE AVENUE•NEW BRUNSWICK•NEW JERSEY 08903•201/932-7961

To: New Jersey Measurement Team
From: Ellen C. Clark
Date: January 30, 1975

Re: Modifications made in the Procedures Manual as a result of Phase I of the New Jersey Measurement Study and feedback sessions

1. BPR Probability Sample

    a. The number of titles will be cut to 500 which will reduce the time and personnel involved in data collection but still retain the validity of the sample.

    b. In the published manual, instructions will be given for drawing a sample from LJ as a supplement to BPR.

    c. The use of BPR in small libraries is being reconsidered since the number of titles owned is so small that further analysis is impossible.

    d. Juvenile titles will be so indicated on the data collection form.

    e. Space will be provided for recording the Dewey number next to the titles owned.

    f. Since so few libraries can check their circulation files conveniently, this aspect of the data collection will be eliminated from the form and included only as an additional area to be considered for those libraries that would be willing and able to do so.

2. Title Availability Sample

    a. More space will be provided on the data collection form to record the title more completely.

    b. Determination of sample interval will be simplified.

    c. Circulation will be dealt with as in 1f. above.

3. Periodical Sample

    a. Length of run will be eliminated from the data collection form.

    b. An additional tabulation form will be provided for probability of ownership by index.

    c. An additional sample may be drawn from Readers Guide to supplement the main sample.

4. Inside the Library Circulation

    a. Date of materials used has been eliminated from the data collection form.

    b. Some libraries may want to monitor popular magazines and newspapers more frequently than once an hour.

    c. Point out in the Procedure Manual that it is not necessary to reshelve marerials left to be counted each hour, merely remove them to book carts until they can conveniently be replaced.

5. Outside the Library Circulation

    a. We might add further tabulations such as, average number of items borrowed per hour, average number of books borrowed per borrower, percent of users borrowing books, etc.

6. Inter-Library Loan Circulation

    a. This section will be removed for the time being. It will be completely revamped at a later date.

7. User Characteristics

    a. Additional, primarily quicker, methods of tabulating the user tickets will be added.

    b. Tabulation tables will be better sequenced to facilitate the flow of tabulation.

    c. It will be suggested that the tickets be coded before any method of tabulation is used. A code sheet will be provided.

    d. Provision will be made on the tabulation forms for graduate, technical, and pre-school categories of users.

e. Provision will be made for individuals who are employed but also involved in some kind of school work.

f. More examples of the occupational categories will be provided.

g. Elimination of the question on ownership of a library card is being considered. In cases where there is reciprocal borrowing between libraries, the answer to this question is ambiguous therefore casting doubt on the data collected.

h. No response and % columns will be added to the tabulation forms where lacking.

i. Sequential numbering of tickets before they are distributed may be suggested in order to determine the number of tickets that are not returned during the day monitored.

8. Facilities and Equipment Availability and Usage

a. The forms for recording availability and usage of equipment and facilities will be sychronized so that all items listed on one coincide with those listed on the others.

b. Additions should be made to the list of equipment.

c. It might be suggested that some pieces of equipment should be monitored more frequently. For example, a log sheet might be more applicable for a photocopy machine.

9. Staff Availability

a. The data collection form will be modified in order to make the tabulation instructions clearer.

b. Small libraries may find this measure less useful if there are only one or two staff members on duty at any one time.

c. Instructions will be made more explicit as to exactly who is to be counted and who is not.

10. Patterns of Staff Assistance

a. Definitions of types of questions will be made more rigorous.

b. Directional questions may be merely tallied by hour without adding any of the other information asked for.

c. Questions by phone should be indicated separately and perhaps added to number of users for the day monitored.

APPENDIX C

Letter sent to Original Sample Libraries

University of Illinois at Urbana-Champaign

LIBRARY RESEARCH CENTER · 220 ARMORY BUILDING · CHAMPAIGN, ILLINOIS 61820 · (217) 333-1980

Dear

The Library Research Center at the University of Illinois, Urbana, under contract with the Illinois State Library, is conducting a project entitled "Measurement and Evaluation of Public Library Services" as part of the State Library's program of measurement and evaluation to assist library administrators at the local, system and state level.

The project complements and parallels the work of the Public Library Associations' Committee on Public Library Goals, Guidelines, and Standards, and the Illinois Library Association's Standards Committee.

The long-range goal of the project is to make available meaningful information to assist public library board members, library administrators, government officials, and interested citizens in the evaluation of their public libraries.

More specifically, the Library Research Center will (1) test the PLA performance measures developed by the Bureau of Library and Information Science Research at Rutgers University in a random sample of Illinois public libraries, (2) teach a sample of Illinois librarians and Illinois library system personnel the data collection techniques necessary for testing the PLA performance measures, (3) analyze the information collected in order to determine the relationship between the PLA performance measures, library-community characteristics, ILA standards, and professional judgement, and (4) prepare a final report detailing findings and presenting tentative norms to assist library administrators in interpreting the PLA measures.

Your library has been selected as part of the random sample of Illinois public libraries. The libraries were drawn so as to guarantee a representative sample with respect to various size and budget factors. Participating libraries will be required to (1) send a representative to a one-day workshop to learn the necessary data collection techniques, (2) train their staff to collect the appropriate performance measures data, and (3) allow the Library Research Center staff to collect data on each library's characteristics. The data will then be tabulated and analyzed by the Research Center and made available to Illinois Public Libraries in a final report. In addition, each participating library will be given a profile of its scores on the measurement criteria which show how each score related to those of other libraries of similar size.

It is expected that the workshops will be held in several locations in the state during the month of January 1975. The libraries will then collect the data for a three day period in the month of February, March, or April. The Research Center will issue the final report in the summer of 1975.

Needless to say, your cooperation is critical to the success of this project, and we sincerely hope that you will be able to participate. If you have any questions, please write Dr. Lucille Wert at 220 Armory Building, University of Illinois, Urbana, Illinois, 61801, or call (217)-333-1980.

Sincerely,

APPENDIX D

Notice of Workshops sent to Sample Libraries

University of Illinois at Urbana-Champaign

LIBRARY RESEARCH CENTER · 220 ARMORY BUILDING · CHAMPAIGN, ILLINOIS 61820 · (217) 333-1980

Dear Librarian:

Enclosed please find your copy of the manual Performance Measures for Public Libraries by Ernest R. DeProspo et al. One representative of your library (e.g., Library director, staff member, board of trustee member, etc.) is invited to read the manual and attend one of the four regional workshops that will be held in the following locations across the state:

For members of:	Workshop location and date:
Western Illinois Library System	Withers Public Library
Illinois Valley Library System	202 East Washington Street
Rolling Prairie Library System	Bloomington, Illinois 61701
Great River Library System	
Lincoln Trail Library System	Monday, March 10, 1975
Corn Belt Library System	
and Mattoon Public Library	
Lewis and Clark Library System	Helen Matthes Library
Cumberland Trail Library System	100 East Market Avenue
Kaskaskia Library System	Effingham, Illinois 62401
	Tuesday, March 11, 1975
Northern Illinois Library System	Rockford Public Library
River Bend Library System	215 North Wyman Street
Starved Rock Library System	Rockford, Illinois 61101
	Monday, March 17, 1975
North Suburban Library System	Wheaton Public Library
Suburban Library System	225 North Cross
DuPage Library System	Wheaton, Illinois 60187
	Monday, March 24, 1975

(All workshops will be held from 9:30 a.m. to 4:00 p.m.)

The sessions will teach the use of the manual to all public library participants through realistic examples and actual practice of data collection.

APPENDIX E

Notice of Workshop sent to Systems Headquarters

University of Illinois at Urbana-Champaign

LIBRARY RESEARCH CENTER · 220 ARMORY BUILDING · CHAMPAIGN, ILLINOIS 61820 · (217) 333-1980

February 21, 1975

Dear

Enclosed please find one copy of Performance Measures for Public Libraries by Ernest R. DeProspo et al.. This manual will be discussed at a workshop to be held on Friday, March 7 from 9:30 a.m. to 4:00 p.m. at the Rolling Prairie Library Systems Headquarters, 345 West Eldorado Street, Decatur, Illinois.

Representatives of your system are invited to the above-mentioned workshop. The main purpose of this session will be to teach the use of the manual to the participating system personnel through realistic examples and actual practice of data collection. Participants should read the manual prior to March 7th.

We hope that your system will be able to send two staff members to the workshop. They will then be responsible for assisting those libraries in your system which participate in the performance measures study. Their responsibilities will include supervising the participating public libraries in your system in the application of the performance measures and helping them to resolve any problems encountered during the three-day survey period. Data collection problems may also be referred to the Performance Measures staff at the Library Research Center.

Please call the Library Research Center at (217)-333-1980 to inform us whether or not your system will be participating in the workshop and the names of the staff members who will be attending.

Thank you for your cooperation.

Sincerely yours,
Performance Measures
Evaluation Staff
Library Research Center

Friday, March 7, 1975
9:30 - 4:00
Rolling Prairie Library System Headquarters
Parking available

APPENDIX F

Questionnaire sent to Subsample of Participants

University of Illinois at Urbana-Champaign

LIBRARY RESEARCH CENTER · 220 ARMORY BUILDING · CHAMPAIGN, ILLINOIS 61820 · (217) 333-1980

June 16, 1975

Dear Librarian:

Thank you for participating in the study on Performance Measures for Public Libraries. In order to fully evaluate the performance measures manual and related activities, we believe that we need feedback from librarians that actually conducted or assisted in the conduct of a library evaluation. Consequently, we would greatly appreciate your completing the following questionnaire and returning it to the Library Research Center by June 25. (Systems personnel should answer only those questions that relate to their experience with the performance measures study.) Thank you.

Library Research Center Staff

1. Approximately how many staff hours were needed to prepare for the three-day performance measures study of your library?
   ____

2. Approximately how many staff hours were needed to organize and tabulate the data collected during the three-day performance measures study? ___________

3. How many extra persons (e.g., volunteers, temporary employees, etc.), if any, were needed by your library to complete the three-day study and tabulations? ___________

4. In your opinion, is the performance measures manual sufficiently self-explanatory? __________

5. What problems did you encounter in connection with the performance measures manual and/or the three-day study?

6. Which portions of the performance measures study do you expect to be the most helpful in the administration of your library?

The least helpful?

7. How helpful did you find the workshop on the use of the performance measures manual? (Rate on the following 5-point scale):

|__________|__________|__________|__________|

No Help   Great Help

Do you have any suggestions for changes in future workshops on the performance measures manual (e.g., longer workshops, more explicit instructions)?

8. What is your general opinion of the performance measures manual as a tool for assisting in the evaluation and improvement of your library?

Please telephone your system headquarters by March 4, 1975, to inform them that: (a) you will participate in the study and the appropriate workshop, (b) you will participate in the study but will not be able to attend the workshop, or (c) you will not be able to participate in the study. Participants who cannot attend the workshop should contact their system headquarters and arrangements will be made to schedule separate training sessions. Please consult your system headquarters about travel expenses, etc.

Thank you for your cooperation.

Sincerely yours,
Performance Measures
Study Staff
Library Research Center

Note: The members of the Illinois Valley Library System and Mattoon Public Library will be contacted directly by members of the Library Research Center's Performance Measures staff.